A WAY
TO GET
WEALTH

1668

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A VVAY TO GET WEALTH

CONTAINING

Six Principall Vocations, or Callings,

in which every good Husband or Houſe-wife may lawfully imploy themſelves.

AS,

1. *The Natures, Ordering, Curing, Breeding, Choice, Uſe, and Feeding of all ſorts of Cattel, and Fowl, fit for the Service of Man: As alſo the Riding and Dieting of Horſes, either for War or Pleaſure.*
2. *The Knowledge, Uſe, and Laudable Practice of all the Recreations meet for a* Gentleman.
3. *The Office of a Houſe-wife, in Phyſick, Chirurgery, Extraction of Oyles, Banquets, Cookery, Ordering of Feaſts, Preſerving of Wine, conceited Secrets, Diſtillations, Perfumes, Ordering of Wooll, Hemp, Flax, Dying, Uſe of Dayries, Maulting, Brewing, Baking; and the Profit of Oats.*
4. *The Inrichment of the Weald in* Kent.
5. *The Husbanding and Inriching of all ſorts of Barren Grounds, making them equall with the moſt fruitful: With the Preſervation of Swine. And a Computation of Men and Cattles Labours, &c.*
6. *The making of Orchards, Planting and Graffing, the Office of Gardening, and the Ornaments, with the beſt Husbanding of Bees.*

The firſt Five Books gathered by *G. M.* The laſt by Maſter *W. L.* for the Benefit of *Great-Brittain.*

The Twelfth time Corrected, and Augmented by the Author.

LONDON,
Printed by *John Streater*, for *George Sawbridge*, at his Houſe on *Clarken-well-Green*, 1668.

A WAY TO GET WEALTH

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HUSBANDRY,

FOR

The *well-Ordering* of all Beasts and Fowls, and for the general Cure of their Diseases.

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Shewing further the whole Art of Riding Great Horses, with the breaking and ordering of them, and the Dyeting of the Running, Hunting, and Ambling Horse, and the manner how to use them in their Travel.

Also, approved Rules for the Cramming, and fatting all sorts of Poultry, and Fowls, both tame and wild, &c. And divers good and well approved Medicines, for the Cure of all the Diseases in Hawks, of what kind soever.

Together with the Use and Profit of Bees, the manner of Fish-Ponds, and the taking of all sorts of Fish.

Gathered together for the general Good and Profit of the Common-wealth, by exact and assured Experience from English practices, both certain, easie, and cheap; differing from all former and forrain experiments, which either agreed not with our Clime, or were too hard to come by, or over-costly, and to little purpose; all which herein are avoided. Newly Corrected and Enlarged with many Excellent Additions.

The Twelfth Edition.

LONDON,
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TO THE

Right Honourable,

And most enobled with all inward, and outward Vertues,

RICHARD SACKVILE,

Baron of *Buckhurst*, and Earl of *Dorset*, &c.

ALthough the monstrous shapes of Books (Right Honourable, and best enobled Lord) have, with their disguised and unprofitable Vizard-like faces, half scar'd even Vertue her self from that ancient Defence and Patronage, which in former Ages most Nobly she employed, to preserve them from Envy: Yet so much I know, the largeness of your Worthy Brest is endued with Wisdome, Courage, and Bounty, that notwithstanding the vanities of our ignorant Writers, you will be pleased out of your Noble Spirit, favourably to behold whatsoever shall bring a publick good to our Countrey, at which end I

have

have only aymed in this small Book: in which, though I have run far from the way or tract of other Writers in this nature, yet I doubt not but your Honour shall find my path more easie, more certain, and more safe than any, nay by much less difficult or dangerous to walk in. I must confess something in this nature I have formerly published, as namely of the Horse only, with whose Nature and Use I have been exercised and acquainted from my Childhood, and I hope, without boast, need not yield to any in this Kingdome: Yet in this Work, I hope your Lordship, and all other Princely maintainers of that worthy and serviceable Beast, shall find, I have found out, and herein explained, a nearer and more easie course for his preservation and health, than hath hitherto been found or practised by any but my self only: whatsoever it is, in all humbleness I offer it as a sacrifice of my Love and Service to your Honour, and will ever whilst I have breath to be

Your Honours

in all dutiful Service,

G. M.

TO THE Courteous READER.

THere is no Artiſt, or man of Induſtry (Courteous and Gentle Reader) which mixeth Judgment with his Experience, but findeth in the travel of his Labours better and nearer courſes to make perfect the beauty of his work, than were at firſt preſented to the eye of his knowledge: for the Minde being pre-occupied, and buſied with a vertuous ſearch, is ever ready to catch hold of whatſoever can adorn or illuſtrate the Excellency of the thing, in which it is imployed; and hence it hapneth, that my ſelf, having ſeriouſly beſtowed many years to finde out the truth of theſe knowledges, of which I have treated in this Book, have now found out the infallible way of curing all diſeaſes in Cattle; which is by many degrees more certain, more eaſie, leſs difficult, and without all manner of coſt and extraordinary charges, than ever hath been publiſhed by any home-born or forrain practicer. Wherein (friendly Reader) thou ſhalt find that my whole drift is to help the needful in his moſt want and extremity. For having many times in my journying, ſeen poor and Rich-mens Cattel fall ſuddenly ſick, ſome travelling by the way, ſome drawing in the Plough or Draught, and

and some upon other Imployments; I have also beheld those Cattel or Horses dye, ere they could be brought either to a Smith, or other places where they might receive Cure: Nay, if with much pains they have been brought to the place of Cure, yet have I seen Smiths so unprovided of Apothecaries Simples, that for want of a matter of six-pence, a Beast hath died worth many Angels. To prevent this, I have found out those certain and approved Cures, wherein if every good Horse-lover, or Husbandman, will but acquaint his knowledge with a few herbs, or common-Weeds, he shall be sure in every Field, Pasture, Meadow, or Land-furrows; nay, almost by every high-way-side, or blind Ditch, to find that which shall preserve and keep his Horse from all suddain extremities. If thou shalt find benefit, think mine hours not ill wasted; if thou shalt not have occasion to approve them, yet give them thy gentle passage to others, and think me, as I am,

Thy Friend,

G. M.

A short Table expounding all the hard words in this Book.

A

Auri-pigmentum, or *Orpment*, is a yellow hard substance to be bought at the Apothecaries.

Aristolochia-longa, otherwise called red *Madder*, is an Herb growing almost in every field.

Aristolochia-rotunda, is the Herb called *Galingale*.

Agrimony, or *Egrimony*, is an usual and known Herb.

Ameos, *Comin royal*, is an Herb of some called *Bulwort*, *Bishops-weed*, or *Herb-william*.

Anise, is that Herb which bears *Anise-seeds*.

Aver, of some called *Dill*, is an Herb like *Fennel*, only the seeds are broad like *Oringe-seed*.

Agnus-Castus, of some called *Tulesain*, is an Herb with reddish leaves, and sinewy, like *Plantane*.

Egyptiacum, is a reddish *Unguent*, to be bought at the Apothecaries, and is soveraign for *Fistulaes*.

Assafœtida, a stinking strong Gum, to be bought at the Apothecaries.

Adraces, or *Adarces*, is that *Salt* which is ingendred on the Marshes, by the violence of the Suns heat after the tide is gone away.

Asterion, is an Herb growing amongst stones, as on walls, or such like; it appeareth by night, it hath yellow flowers like Foxgloves, and the leaves are round and blewish.

Aloes, is a bitter Gum, to be bought at the Apothecaries.

B

Beten, or *Beets*, is an Herb with long broad leaves indented, and grows in hedge-rows.

Bole-armenick, is a red hard earthly substance, to be bought at the Apothecaries, and is of a cold and binding nature.

Broomwort, is an Herb with brown coloured leaves, and beareth a blew flower, and most commonly grows in Woods.

C

Cresses, are of two kinds, *Water-Cresses*, and *Land-Cresses*: they have broad smooth leaves, and the first grows in moist places, the later in Gardens, or by high-waies.

Comin, see *Ameos*.

Carthamus, is an Herb in taste like *Saffron*, and is called *bastard-Saffron*, or *Mock-Saffron*.

Calamint, is an ordinary Herb, and groweth by Ditches sides, by high-waies, and somtimes in Gardens.

Coriander, is an Herb which beareth a round little seed.

Chives, are a small round Herb growing in Gardens, like little young *Onions*, or *Scallions*, not above a week old.

D

Diapente, a soveraign powder made of five equal simples, as *Bay-berries*, *Ivory*, *Aristolochia-rotunda*, *Myrrhe*, and *Gentiana*, may be bought of the Apothecary.

Betony, is an Herb called *Pepper-wort*, or *Horse-radish*, and grows in many open fields.

Dragon, is an Herb common in every Garden.

E

Elicampane, is an Herb of some called *Horse-helme*, and grows almost in every field, and every Garden.

Eye-bright, is an Herb common in every Meadow.

F

Fennegreek, is an Herb which hath a long slender trailing stalk, hollow within, and sown in Gardens, but easiest to be had at the Apothecaries.

Fernsmund, is an Herb of some called *Water-Fern*, hath a triangular stalk, and is like *Polypody*, and it grows in Bogs and hollow grounds.

G

Galingale, see *Aristolochia-rotunda*.

H

Horse-mint, is an Herb that grows by water sides, and is called *Water-mint*, or *Brook-mint*.

Horse-Helm, see *Elicampane*.

House-

Houſe-leek, is a weed which grows upon the tops of houſes that are thatcht, and are like unto a ſmall *Hartichoke*.

Hearb Robert, hath leaves like *Hearb Bennet*, and ſmall flowers of purple colour, and grows in moſt common fields and Gardens.

I

Ivory, is the ſhaving of the *Elephants* tooth, or the old *Harts* or *Stags* horn, being the ſmooth white thereof.

K

Knot-graſs, is a long round weed, with little round ſmooth leaves, and the ſtalks very knotty and rough, winding and wreathing one ſeam into another very confuſedly, and groweth for the moſt part in very moiſt places.

L

Lettuce, is a common ſallet in every Garden.

Lollium, is that weed which we call *Cockel*, and groweth amongſt the corn in every field.

Liverwort, is a common Herb in every garden.

M

Mayth, is a Weed that grows among corn, and is called of ſome *Hogs-fennel*.

Myrrhe, is a Gum to be bought at the Apothecarries.

Man-drake, is an Herb which grows in gardens, and beareth certain yellow Apples, from whence the Apothecaries draw a ſoveraign Oil for broken bones.

N

Nepe, ſee *Calamint*.

O

Origanum, is an Herb called *Wild-Marjerom*, and grows both in open fields, or in low Copſes.

Orifice, is the mouth, hole, or open paſſage of any wound or ulcer.

Opoponax, a Drug uſual to be bought at the Apothecaries.

P

Pitch of *Burgundy*, is *Roſen*, and the blacker the better.

Plantane, is a fat leaf and ſinewy, growing cloſe to the ground, and it is called Whay-bred leaf.

Pliol-roral, is an Herb that groweth both in fields and gardens, and is beſt when it flowreth.

Patch-greaſe, it is that tallow which is gotten from the boyling of Shoo-makers ſhreads.

Q

Quinque-folio, of ſome called *Cinque-foile*, is that Herb which is called *Five-leaved Graſs*.

R

Red-Oker, is a hard red ſtone, which we cal *Raddle*, *Orell*, *Marking-ſtone*.

S

Selendine, or *Tetterwort*, is a Weed growing in the bottome of Hedges, which being broke, a yellow juice will drop and run out of it.

Sherwit, is an Herb with many ſmall leaves, and grows moſt in Gardens.

Stubwort, is an Herb which grows in woody places, and is called *Wood Sorrel*.

Sanguis Draconis, is a hard red Gum to be bought at the Apothecaries.

Sperma cæti, is the ſeed of the *Whale*, excellent for inward bruiſes, and to be bought at the Apothecaries.

Stonecrop, is a green Weed growing on the tops of walls.

Sal-armoniack, is a Drug to be bought at the Apothecaries.

T

Tuſſilaginis, is that Weed which we call *Colts-foot*.

Triapharmacon, a compoſition made of three ſimples; and to be bought at the Apothecaries.

Turn-merick, is a yellow Simple, of ſtrong ſavour, to be bought at the Apothecaries.

V

Verdigreaſe, is a green fatty Gum drawn from Copper; and is to be bought at the Apothecaries.

W

Wood-roſe, or *Wild Eglantine*, is that ſmall thin flower which grows upon Briars in Woods or Hedges.

Y

Yarrow, is an Herb called the *Water Violet*, and grows in Lakes or Mariſh grounds.

THE

THE GENERALL CURE AND ORdering of all Horſes: As alſo the whole Art of Riding great Horſes; with the breeding, breaking, and ordering of them: Together with the manner how to uſe the running, hunting, and ambling Horſe, before, in, and after their Travel.

CHAP. I.

Of the Horſe in general, his choice for every ſeveral Uſe, his Ordering, Diet, and beſt preſervation for health, both in Travel, and in Reſt.

THE full ſcope and purpoſe of this work, is in few, plain, and moſt undoubted true words to ſhew the Cure of all manner of diſeaſes belonging to all manner of neceſſary Cattel, nouriſhed and preſerved for the uſe of man, making by way of demonſtration, ſo eaſie and plain a paſſage, to the underſtanding and accompliſhment of the ſame, that not the ſimpleſt which hath priviledge to be eſteemed no Idiot; nor the pooreſt, if he can make two ſhillings, but ſhall both underſtand how to profit himſelf by the Book, and at the cheapeſt rate purchaſe all the receipts and ſimples declared in the whole Volume. For in ſober truth this Book is fit for every Gentleman, Husbandman, and good mans pocket, being a memory which a man carrying about him will, when he is call'd to account, give a man full ſatisfaction whether it be in the Field, in the Town, or any other place where a man is moſt unprovided.

Nature of horſes.

And now foraſmuch as the Horſe of all creatures is the nobleſt, ſtrongeſt, and apteſt to do a man the beſt and worthieſt ſervices both in Peace and Warre, I think it not amiſs firſt to

begin with him. Therefore of his nature in general: he is valiant, ſtrong, and nimble, and above all other breaſts moſt apt and able to indure the extreameſt labours, the moiſt quality of his compoſition being ſuch, that neither extream heat doth dry up his ſtrength, nor the violence of cold, freeze the warm temper of his moving ſpirits; but that where there is any temperate goverment, there he withſtandeth all effects of ſickneſſe, with an uncontrouled conſtancy. He is moſt gentle and loving to the Man, apt to be taught and not forgetful when an impreſſion is fixed in his brain. He is watchful above all other beaſts, and will endure his labour with the moſt empty ſtomach; he is naturally given to much cleanlineſs, is of an excellent ſcent, and offended with nothing ſo much as evil ſavours.

The choice of Horſes, and their ſhapes

Now for the choice of the beſt Horſe, it is divers, according to the uſe for which you will employ him. If therefore you would have a Horſe for the Warres, you ſhall chuſe him that is of a good tall ſtature, with a comely lean head, an outſwelling forehead, a large ſparkling eye, the white whereof is covered with the eyebrows, and not at all diſcerned, or if at all, yet the leaſt is beſt; a ſmall thin ear ſhort and pricking; if it be long, well carried and ever moving, it is tolerable; but if dull or hanging, moſt hateful: a deep neck, large creſt, broad breſt, bending ribs, broad and ſtreight chine, round and full buttock, with his huckle-bones hid, a tayle high and broad, ſet on neither too thick, nor too thin; for too much hair ſhews ſloath, and too little, too much choller and heat: a full ſwelling thigh, a broad, flat, and lean leg, ſhort paſtern'd, ſtrong joynted, and hollow bones, of which the long is beſt, if they be not wier'd, and the broad round the worſt.

Colours of Horſes.

The beſt colours are Bown-bay, Daple-gray, Roan, Bright-bay, Black, with a white near foot behind, white far foot before, white rache, or white ſtar, Cheſnut or Sorrel, with any of thoſe marks, or Dun with a black liſt: And of theſe horſes, for the Wars the Courſer of *Naples* is accounted the beſt, then the *Almain*, the *Sardinian*, or the *French*.

Horſes for a Princes Seat,

If you would chuſe a Horſe for a Princes Seat, any ſupream

Magistrate, or for any great Lady of State, or woman of eminence you shall chuse him that is of the finest shape, the best rein, who naturally bears his head in the best place, without the help of the mans hand; that is of nimblest and easiest pace, gentle to get upon, bold without making affrights, and most familiar and quiet in the company of other Horses: his colour would ever be milk-white, with red frains, or without, or else fair daple gray with white Mane, and white Tayle: And of these the *English* is best, then the *Hungarian*, the *Sweathland*, the *Poland*, the *Irish*.

Horses for Travel.

If you will chuse a Horse only for travel, ever the better shape the better hope, especially look that his head be lean, eyes swelling outward, his neck well risen, his chine well risen, his joynts very strong; but above all his pasterns short and straight, without bending in his going, and exceeding hollow and tough hoofs: let him be of a temperate nature, neither too furious, nor too dull, willing to go without forcing, and not desirous to run when there is no occasion.

Hunting horses.

If you would chuse a Horse for hunting, let his shape in general be strong, and well knit together, making equal proportions; for as unequal shape shew weakness, so equal members assure strength and indurance. Your unequal shapes are a great head to a little neck, a big body to a thin buttock, a large limb to a little foot, or any of these contraries, or where any member suits not with the whole proportion of the body, or with any limb next adjoyning. Above all let your hunting Horse have a large lean head, wide nostrils, open chauld, a big weasand, and the windpipe straight, loose, well covered, and not bent in the pride of his Reining: The English Hore, bastardized with any of the former Races first spoke of, is of all the best.

Running horse.

If you chuse a Horse for running, let him have all the finest shape that may be, but above all things, let him be nimble, quick and fiery, apt to fly with the least motion: long shapes are sufferable, for though they shew weakness, yet they assure sudden speed. And the best Horse for this use, is the *Arabian*, *Barbary*, or his bastard, Jennets are good, but the Turks are better.

If

Coach-horſe. If you will chuſe a Horſe for the Coach, which is called the ſwift draught, let his ſhape be tall, broad, and well furniſht, not groſſe with much fleſh, but with the bigneſſe of his bones, eſpecially look if he have a ſtrong neck, a broad breaſt, a large chine, ſound clean limbs, and tough hooves: and for this purpoſe, your large Engliſh Geldings are beſt, your Flemiſh Mares next, and your ſtrong Ston'd Horſes tolerable, *Flemiſh* or *Friſons.*

Pack-horſes. If you will chuſe a Horſe for Portage, that is for the Pack or Hampers, chuſe him that is exceeding ſtrong of Body and Limbs, but not tall, with a broad back, out ribs, full ſhoulders and thick withers; for if he be thin in that part, you ſhall hardly keep his back from galling: be ſure that he take a ſtrong ſtride with his feet, for their pace being neither trot nor amble, but only a foot pace, he which takes the largeſt ſtrides goes at the moſt eaſe, and rids his ground faſteſt.

Cart-horſes. Laſtly, if you will chuſe a Horſe for the Cart or Plough, which is the ſlow draught, chuſe him of the moſt ordinary height, for Horſes in the Cart unequally ſorted, never draw at eaſe, but the tall hang up the low Horſe. Let them be of good ſtrong portion, big breaſted, large bodied, and ſtrong limb'd, by nature rather inclin'd to crave the whip, than to draw more than is needful. And

Of Mares. for this purpoſe Mares are moſt profitable; for beſides, the effecting of your work, they yearly bring you forth increaſe: therefore, if you furniſh your draught with Mares to breed, obſerve in any wiſe, to have them fair fore-handed, that is good neck, breaſt, and ſhoulders; for the reſt it is not ſo regardful, only let her body be large; for the bigger room a Foal hath in the dams belly, the fairer are his members. And above all things obſerve never to put your draught beaſts to the Saddle, for that alters their pace, and hurts them in their labours.

Now for the ordering of theſe ſeveral Horſes: firſt for the Horſe for ſervice, during the time of his teaching, which is out of the Wars, you ſhall keep him high and luſtily; his food, no Straw but good Hay, his provender clean dry Oats, or two parts Oats, and one part Beans, or Peaſe, well dried and hard, the quantity of half a peck at a watering, morning, noon, and evening, is ſufficient.

In

In his daies of rest, you shall dress him betwixt five and six in the morning, water betwixt seven and eight, and feed from nine till after eleven: in the afternoon, you shall dress betwixt three and four, water betwixt four and five, and give provender till six, then litter at eight, and give food for all night. The night before he is ridden, you shall at nine of the clock at night take away his hay from him; at four of the clock in the morning give him a handful or two of Oats, which being eaten, turn him upon his snaffle, rub all his body and legs over with dry cloaths, then saddle him, and make him fit for his exercise. Soon as he is cal'd for to be ridden, wash his bit in fair water, and put it into his mouth with all other things necessary, draw up his girths, and see that no buckles hurt him: then lead him forth, and as soon as he hath been ridden, all sweating as he is, lead him into the stable; & first rub him quickly over with dry wisps, then take off his saddle, and having rubb'd him all over with dry cloaths, put on his housing cloath, then set on the saddle again, and girt it: then lead him forth, and walk him up and down in gentle manner an hour or more, till he be cold, then set him up, *and after two or three hours fasting*, turn him to his meat: then in the afternoon, curb, rub and dress him, then water him, and order him as is aforesaid.

Ordering of horses for a Princes seat.

For ordering of the Horse for a Prince, or great Ladies seat, *let it be in his time of rest, like unto the horse for service: and in his time of labour like the travelling horse, as shall be shewed instantly: only because he is to be more choicely kept, I mean in the beautifullest manner, his coat lying smooth, and shining, and his whole body without any stain or ilfavouredness*; you shall ever when he hath been ridden, and commeth in much sweating, presently have him into the stable, and first rub him down with clean wisps, then taking off his saddle, with a Sword-blade whose edge is rebated; you shall streak his neck and body clean over, leaving no sweat nor filth that can be gotten out; *then cloath him up, and set on the saddle, and walk him forth as aforesaid*. After, order and diet him as you do other travelling Horses: dry Oats is his best provender, if he be fat and full, and Oats and Beans, if he be poor, or subject to lose his flesh quickly.

Ordering of travelling horses.

For your travelling horse, you shall feed him with the finest hay

hay in the Winter, and the sweetest grass in Summer: His Provender will be dry Oats, Beans, Pease or Bread, according to his stomach: in the time of rest, half a peck at a watering is sufficient; in the time of his labour, as much as he will eat with a good stomach. When you travel, water him two hours before you Ride; then rub, dress, and lastly feed: then bridle up, and let him stand an hour before you take his back. Travel moderately in the morning till his wind be rack't, and his limbs warmed, then after do as your affairs require. Be sure at night to water your Horse two miles before you come to your journeys end, then the warmer you bring him to his Inn, the better: walk not, nor wash not at all, the one doth beget colds, the other foundring in the feet or body: but set him up warm, well stopt, and soundly rub'd with clean litter. Give no meat whilst the outward parts of your Horse are hot or wet with sweat, as the ear roots, the flanks, the neck, or under his chaps: but being dry, rub and feed him according to the goodness of his stomach. Change of food begetteth a stomach, so doth the washing of the tongue or nostrils with vinegar, wine and salt, or warm urine. Stop not your Horses fore-feet with Cows dung, till he be sufficiently cold, and that the blood and humours which were dispersed, be setled into their proper places. Look well to his back, that the saddle hurt not, to the girths that they gall not, and to his shooes, that they be large, fast, and easie.

Ordering of hunting horses.

For the ordering of your Hunting-horse, let him in the time of his rest, have all the quietness that may be, much litter, much meat, and much dressing, water ever by him, and leave him to sleep as long as he pleaseth. Keep him to dung, rather soft than hard, and look that it be well coloured, and bright, for darkness shews grease, and redness inward heating. After exercises, let mashes of sweet mault, be his usual scourings; and let bread of clean beans, or beans and wheat equally mixt, be his best food, and beans and oats the most ordinary.

Ordering of running horses

For the ordering of your running Horse, let him have no more meat than to suffice nature, drink once in four and twenty hours, and dressing every day once, at Noon only. Let him have much moderate exercise, as Morning and Evening ayrings, or the fetching of his water, and know no violence but in his courses only.

Let

Let him stand dark and warm, have many cloaths, and much litter, being wheat straw only. If he be very fat, scour oft; if of reasonable state, scour seldome; if lean, then scour but with a sweet mash only. Be sure your horse be empty before he course; and let his food be the finest, lightest, and quickest of digestion that may be: the sweats are more wholsome that are given abroad, and the cooling most natural which is given before he come into the stable. Keep his limbs with cool oyntments, and by no means, let any hot spices come into his body: if he grow dry inwardly, wash't meat is very wholsome. If he grow loose, then give him straw in more abundance. Burning of sweet perfume in the stale is wholsome; and any thing you either do about your horse, or give unto your horse, the more neat, cleanly, and sweet it is, the better it nourisheth.

Ordering of Coach-horses.

For ordering the Coach-horse, let him have good dressing twice a day, Hay and Provender his belly full, and Litter enough to tumble on, and he cannot chuse but prosper. Let him be walk't and wash't after travel, for by reason of their many occasions to stand still, they must be inur'd to all hardness, though it be much unwholsome. Their best food is sweet Hay, and well dried Beans and Oats, or Bean-bread: Look well to the strength of their shooes, and the galling of their Harness. Keep their leggs clean, especially about the hinder feet-locks, and when they are in the house, let them stand warm cloathed.

Ordering of the Pack and Cart-horse.

For the ordering of the Pack-horse, or the Cart-horse, they need no washing, walking, or hours of fasting; only dress them well, look to their shooes and backs, and then fill their bellies, and they will do their labour. The best food is sweet Hay, Chaff, or Pease or Oat hulls and Pease, or chopt straw, and Pease mixt together, once a week to give them warm Grains and Salt, is not amiss, for their labour will prevent the breeding of worms, or such like mischiefs.

For the preservation of all horses.

Now for the general preservation of horses health, it is good whilst a horse is in youth and strength to let him blood twice in the year, that is, beginning of the Spring, and beginning or the Fall, when you may best afford him a weeks rest. After you have let him blood two daies after, give him a comfortable drench, as 2 spoonfuls of *Diapente*, or such like, which is called *Horse-Mithridate*,

date, in a quart of ſtrong Ale. Uſe oft to perfume his head with Frankincenſe, and in the heat of Summer, uſe oft to ſwim him. Let a fat Horſe drink oft, and a little at once, and a lean Horſe whenſoever he hath appetite. Much rubbing is comfortable, and cheareth every member. Be ſure to let your Horſe eat graſs once in a year, for that cooleth the blood, ſcours away groſs humours, and gives great ſtrength and nouriſhment to the body. If notwithſtanding all theſe principles, your Horſe fall into ſickneſs and diſeaſe, then look into the Chapters following, and you ſhall finde the trueſt, beſt approved, and the moſt familiar medicines for all manner of infirmities, that ever were known or publiſhed except my *Maſter-piece*.

CHAP. II.

Of Riding in general, and of the particular knowledges belonging to the Art of Riding of a great Horſe, or Horſe for ſervice, or Pleaſure.

HAving ſpoken ſomething already of horſes, it now follows, we ſay ſomething of the commendable exerciſe of riding great Horſes, which in the very action it ſelf ſpeaketh Gentleman, to all that are performers or doers of the ſame. And though our Engliſh Gentry from a ſloath in their induſtry, aim for the moſt part at no more skill than the riding, of a ridden and perfect Horſe, which is but only the ſetting forth of another mans vertue, and thereby making themſelves richer in diſcourſe than action: yet our Engliſh Husbandman, or good-man whom I ſeek to make exact, and perfect in all things, ſhall not only recreate himſelf by Riding the horſes whom the other men have made perfect, but ſhall by his own practiſe bring his Horſe from utter ignorance, to the beſt skill that can be deſired in his motions: wherein he ſhall finde a two-fold pleaſure, the one an excellent contentment to his minde, that he can perform ſo worthy an action, without the chargeable aſſiſtance of others, and the other beſtiful ſupport to his body, when by ſuch recreation, his ſpiri-

The pleaſure of riding.

spirits and inward faculties are revived and inflamed.

But now me-thinks, I hear some say, that I have utterly taken away the tune of this string, I have stricken so oft upon it, and that indeed there can be no delight where there is no variation: and that surely I cannot vary any more upon this plain Song, but the World would finde discord either in this, or my former descants. But let them not deceive themselves, for my building standeth on a firm Rock, and I know both shall be worthily justifiable: only this I must inform all men, that in times past, long since, when our first rules of Horsemanship were given unto us, our Masters were not so skilful in the abilities of Horse-performances as we are, but measur'd them by the proportions of their own weaker natures, and thence became so too much tender over them, that they respected neither the greatness of their own labours, nor the length of time before they arrived to their desires, so in the end they might aspire to their wishes with safety and full satisfaction: whence it came to pass, that in those times, and even now in these, chiefly amongst those which are meerly Riders, and no Keepers, there is no less time allowed to the making up of a perfect Horse, then two years; when we know, and my self from experience can justifie the same, that if the Rider can keep as well as Ride, that is, give as well directions for the preservation of a Horses health, and the avoidance of sorances and sickness, as put in practice artfully, every violence to be used in his Lessons, he may very well make up a perfect Horse in three months, fit either for pleasure or battel, which is the full scope and end of this Treatise: wherein I would not have any man expect either new Rules, or contradiction of any already set down by men of practice, and knowledge in the Art, but only a straightning or drawing of them together into a much narrower compass, giving satisfaction to our desires, and finishing up our work with speed, which before was almost lost or neglected, with the length of our labours, as you shall fully perceive by this discourse which followeth. The Riders Apology.

First, then to speak of the taming of a young Colt, which is as it were the preface or introduction to the art of riding: You shall after he hath been in the house a week or a fortnight, and is familiar with the man, and will withal patiently indure curry- The taming of a young Colt.

rying,

rying, combing, rubbing, clawing and handling in every part and member of his body, without any ſhew of rebellion or knaviſhneſs, which you ſhall compaſs by all gentle and eaſie means, doing nothing about him ſuddenly or raſhly, but with leiſure and moderation: then you ſhall offer him a ſaddle, which you ſhall ſet in the manger before him, that he may ſmell to it, and look upon it, and you ſhall gingle the girths and ſtirrops about his ears, to make him careleſs of the noiſe, then withall gentleneſs after you have rub'd his ſides therewithal, you ſhall ſet it on his back, and gird it gently on, and then place his Crooper with all eaſe, which done, you ſhall take a ſweet watring trench, waſh't, and anointed with honey and ſalt, and put it into his mouth, placing it to hang directly about his tuſh, and as it were a little leaning thereupon: this you ſhall do in the morning as ſoon as you have dreſt him, and then thus ſadled and bridled, you ſhall lead him forth, and water him in your hand abroad: then bringing him in, and after he hath ſtood a little reined upon his trench an hour or more, take away the bridle and ſadle, and let him go to his meat till the Evening: then lead him forth as before with the ſadle to the water, then when he is ſet up gently, take off his ſadle and cheriſh him, and then dreſs him, and cloath him up for all night.

His ſadling and bridling.

The next day ſadle and bridle him as before ſaid, and put on him a ſtrong muſrole of writhen Iron, or a ſharp Cavezan and Martingal, which you ſhall buckle at ſuch length, that he may no more but feel it when he jerketh up his head, and then lead him forth into ſome new plowed field, or ſoft ground; and there after you have made him trot a good ſpace about in your hand, and thereby taken away from him all his wantonneſs and knaviſh diſtractions, you ſhall offer your foot to the ſtirrop; at which if he ſhew any diſtaſte; either in body or countenance, you ſhall then courſe him about again: then offer again; and with leiſure riſe half way up, and go down again: at which if he ſhrink, correct him as before, but if he take it patiently, then cheriſh him, and ſo mount into the ſadle, which done, after cheriſhing light down again, and give him bread or graſs to eat: then look that your girths be well girted and ſtreight: that the Crooper be ſtrong and of juſt length, that the bridle hang even, and in his due place, with-

The firſt backing.

without inward or outward offence, that your ſtirrops be fit, and generally all things, without offence either to your ſelf or to the beaſt, and then as before, mount his back, ſeat your ſelf juſt and even in the ſaddle, make the reins of your bridle of equal length, carry your rod without offence to his eye in your right hand, the point either directly upright, or thwarted towards your left ſhoulder: Then having cheriſht him, let the Groom which before led him, having his hand on the chaff halter, lead him forward a dozen or twenty paces, then gently ſtraining your hand, with the help of the foot-man make him ſtand ſtill then cheriſh him, and lead him forward again, and do this five or ſix times one after another, till by continual uſe, you make him of your own accord, (without the foot-mans help) by giving your body, and thruſting your legs forward, go forward; which as ſoon as he doth, you ſhall ſtay him, and cheriſh him, and then ſitting on his back, let your foot-man lead him home, and bring him to the block, where after you have cheriſht him, you ſhall gently alight, and cauſe him to be ſet up, and well dreſt, and meated. The next day you ſhall bring him forth as before, and in all points, take his back, as aforeſaid, and ſo by the help of the foot-man, trot fore-right half a mile at leaſt; then let the foot-man lay off his hand, and walk by him, till you have of your ſelf trotted him forth another half mile, then cheriſh him, and make the foot-man give him ſome graſs or bread to eat, and then taking a large compaſs, trot him home, and bring him to the block as before, and there alight, and ſo ſet him up.

The third day let your foot-man light upon ſome ſpare Jade, and then bringing your Colt to the block, take his back gently, and after you have cheriſht him, the other riding before you, follow him forth-right a mile, ever and anon at the end of twenty or thirty ſcore, ſtopping the Colt gently, cheriſhing him, and making him yield, and go back a ſtep or two, and then putting him forward again, till he be ſo perfect, that with the leaſt motion he will go forward, ſtop and retire, which will be effected in two daies more, in which ſpace, if he chance at any time to ſtrike or rebel, you ſhall make him which rides before you, take the ſpare reyn, and lead him forward; whilſt you give him two or three good laſhes under the belly, and then being in his way, take the

ſpare

ſpare reyn to your ſelfagain: and thus you ſhall do, till all faults be amended: then you ſhall ſpare your horſman, or guide, and only by your ſelf for three or four daies more, trot him every morning and afternoon, at leaſt a mile or two forward, uſing him only to ſtop or retire, and bringing him home a contrary way to that you went forth, till he be ſo perfect and willing, that he will take his way, how or in what manner your ſelf pleaſeth, ever obſerving to mount and diſmount at the block only, except ſome ſpecial occaſion conſtrain you to the contrary.

This you may very well bring to paſs, the firſt week of the Horſes riding.

The three main points of a horſemans skill.

As ſoon as you ſee your Horſe will receive you to his back, trot fore-right, ſtop, and retire, and do all this with great patience and obedience; you ſhall then call into your mind the three main points of a Horſemans knowledge, which are helps, corrections, and cheriſhings. And for helps, they conſiſt in theſe: Firſt the voice, which ſoundeth ſharply and cheerfully, crying, *via*, *how*, *key*, and ſuch like, adds a ſpirit & livelineſs to the Horſe, and lends a great help to all his motions: then the bridle, which reſtrained, or at liberty, helps him how to do, and ſhews which way to do.

Then the Rod which being only ſhewed, is a help to direct; being only moved, helps the quickneſs and nimbleneſs of the motion; and being gently toucht withall, helps the loftineſs of a Horſes ſalts and leaps, and makes him as it were gather all his ſtrength into one point; and laſtly, the calves of the legs, ſtirrop Leathers, and ſtirrops, which moved by the horſes ſide, helps him to nimbleneſs, ſwiftneſs, and readineſs in turning. Some to theſe helps, adde the help of the Spur, chiefly in high ſalts or boundings, but it muſt be done in a juſt and true time, and with ſuch gentle bitterneſs, that the horſe may underſtand it for a help, or elſe he will take diſtaſte, and finding it ſavour like correction, inſtead of bettering his doings, do with more diſorder, as to ſpraul with his fore-feet in advancing, to yerk out with one or both his hinder feet in the corveit or bounding, ſhaking of his head and ſuch like, as will appear in practiſe.

Of Corrections and which they be.

Now of Corrections, the moſt principle is the ſpur, which muſt

muſt not at any time be given triflingly or itchingly, but ſoundly and ſharply, as oft as juſt occaſion ſhall require: then the Rod which upon diſorder, ſloth or miſcarriage of the Members, muſt be given alſo ſoundly: then the voyce which being delivered ſharply and roughly, as *ha villain, carridro, diablo*, and ſuch like threatnings terrifieth the Horſe, and maketh him afraid to diſobey: And laſtly, the Bridle which now and then ſtricken with a hard check in his Mouth, reformeth many vices and diſtemperatures of his Head: yet this laſt muſt be done ſeldome, and with great diſcretion, for to make a Cuſtome thereof, is the ready way to ſpoyle a Horſes Mouth.

Now of Cheriſhings, there are generally in uſe but three, as firſt the voyce, which being delivered ſmoothly and lovingly, as crying, *boll a ſo boy, there boy there*, and ſuch like, gives the Horſe both cheerfulneſs of Spirit, and a knowledge that hee hath done well; then the hand by clapping him gently on the Neck or Buttock, or giving him Graſs, or other Food to eat, after he hath pleaſed you: and laſtly the big end of the Rod, by rubbing him therewith upon the withers or maine, which is very pleaſing and delightfull to the Horſe. Of cheriſhing

Now after theſe ordinary and uſual helps, corrections, and cheriſhings, you ſhall have reſpect to the Muſrole or Cavezen and Martingale, which carry in them all the three former both ſeveral and unite, for it is firſt an eſpecial help and guide to every well diſpoſed Horſe, for ſetting of his Head in a true place, forming of his Rein, and making him appear comely and gallant in the Eyes of the beholders; then it is a ſharp correction when a Horſe yerketh out his Noſe, or diſordereth his Head any way or ſtriveth to plunge or run away with his Rider: And laſtly it is a great cheriſhing unto the Beaſt, when he yeildeth his Head to your hand, by ſhrinking from his Face, and ſo leaving any more to torment him, but when he offendeth: whence it comes that more from this than any thing elſe, the Horſe firſt gaineth the knowledge of his Maſters will, and is deſirous to perform it: therefore you ſhall be very careful to the placing of this upon the Horſe; as firſt that it hang ſomwhat low, and reſt upon the tender Griſſel of the Horſes Noſe, whereby corrections may be the ſharper when occaſion require it; then that it be looſe Of the Muſrole and Martingale.

and not ſtraight, whereby the Horſe may feel, upon the yielding in of his Head how the offence goeth from him, and ſo know that only his own diſorder is his own puniſhment. Laſtly, he ſhall be careful to note how he winneth the Horſes Head, and by thoſe degrees to draw his Martingale ſtraiter and ſtraiter, ſo as the Horſe may ever have a gentle feeling of the ſame, and no more; till his Head and Rein be brought to that perfection that you deſire, and then there to ſtay, and keep the Martingale conſtantly in that place only, which you ſhall perform in thoſe few days which you trot your Horſe forth-right, being before you bring him to any Leſſon, more then the knowledge of your ſelf, and how to receive you to his back, and trot forth obediently with you.

Of treading the large ring.

When your Horſe is brought unto ſome ce tainty of Rein, will trot forth-right with you at your pleaſure, and by your former exerciſe therein is brought to breath and delight in his travell, *which will grow and encreaſe upon him, as you grow and encreaſe in your labour*, then you ſhall bring him to the treading forth of the large Rings in this manner: Firſt, *if he be of heavy and ſluggiſh nature, and ſloathful and dull, and albeit he have ſtrength and ſufficiency of Body, yet you find him ſlovenly and unapt, then you ſhall trot him in ſome new plowed field, ſoft and deep*: But *if he be of quick and of a fiery Spirit, apt, nimble, and ready to learn, then you ſhall trot him in ſome ſandy or gravelly place, where is ſtrong and firm foot hold, and there you ſhall mark out a ſpacious large Ring, at leaſt threeſcore or fourſcore paces in compaſs*, and having walked him ſix or ſeven times about the ſame on your right hand, you ſhall then by a little ſtraitening of your right Rein, and laying the Calfe of your left Leg to his ſide making a half circle within your Ring upon your right hand, down to the center or midpoynt thereof, and then by ſtraitning of your left Rein a little, and laying the Calfe of your right Leg to his ſide, making another half circle to your left hand from the center to the outmoſt verge, which two half circles contrary turned, will make a perfect Roman S. within the Ring; then keeping your firſt large circumference, walk your Horſe about on your left hand, as oft as you did on your right, and then change within your Ring as you did before to your right hand again, and then trot him firſt

Choice of ground.

on

on the right hand, then on the left, so long as you shall think convenient, and although our ancient Masters in this Art have prescribed unto us certain numbers of Ring turns, and how oft it is meet to go about on either hand, as if all Horses were of one even ability; yet I would wish you neglect those Rules, and only to practise your Horse in this Lesson, according to his strength of his Body, sometimes applying him therein an hour, sometimes two, and sometimes three, more or less according to your discretion: for the space of time can neither bring weariness nor tyring: and for your change of hands, you shall do it as oft as shall seem best to your self, being ever very careful to give him the most exercise, and that hand on which he is ever most unwilling to go; and in this Lesson be careful also that he do it cheerfully, lustily, nimbly, quickning and inflaming his Spirits by all means possible, and when you finde that he will trot his large Rings perfectly, which will questionless be in less then a weeks space, being well applied therein, for you must not fore-slow any morning except the Sabbath, hardly any afternoon also, if you find him sloathful and heavy, for there is no greater hinderance then the Riders too much tenderness, nor no greater furtherance then a continual moderate exercise. Therefore as I said when he will trot his Rings well, then in the same manner, and with the same changes, you shall make him gallop the same Rings, which he shall do also with great dexterity, lightness, and much nimbleness, without losing the least part or grace of his best Rein: Nay, so careful you shall be thereof, that in this gallopping, you shall as it were gather his body together, and make his Rein rather better then it was, and make him take up his Feet so truly and loftily, that not any Eye may see or perceive a falshood in his stroke, but that his inward Feet play before his outward, and each of a side follow the other so directly, that his gallop may appear as the best grace of all his motions: neither shall you enter him into this Lesson rashly and hastily, but soberly, and with discretion, making him first gallop a quarter of the Ring, then half, then three parts, and lastly the whole Ring: neither shall you force him into his Ring with violence or the sharpness of Spurs, but with Spirit and Mettal, making him by the lightness and cheerfulness of your own Body,

Of Galloping large Rings.

paſs of his own accord into his gallop, and eſpecially in his changes, where you may let him feel your Legge, and ſhew him your Rod on the contrary ſide: and herein is to be noted, that continually thoſe changes (in as much as they are made in a much ſtraighter compaſs) muſt be done ever with great quickneſs, and more ſtirring nimbleneſs then entire leſſons.

Helps in the large Ring-turns.

Now for the helps neceſſary in theſe large Ring-turnes, they conſiſt generally in the *Voice*, *Rod*, *Calves* of your Legs, and the *Bridle*; In the *Voice* by quickning him up, and reviving his Spirits when he grows ſloathful, with theſe words, *How hey*, or *via*: In the *Rod*, by ſhewing it him on the contrary ſide, or laying it on the contrary Shoulder, and ſometimes by ſhaking it over his Head, which is a kind of threatning, cheifly when you make your changes. In the Calves of your Legs, when you clap them hard to the contrary ſide to which he turneth, or ſpringing and jerking your Legs forward, hard upon your Stirrop leathers, which will quicken him and make him gather up his Limbs better than the ſpur by many degrees: And laſtly, in the Bridle, by drawing it in a little ſtraiter, and holding it with ſome more conſtancy, when you put any of your former helps in uſe, or do any thing with more life or courage, for that maketh him draw his Limbs together, and ſo ſtraiten his Rings with gracely comlineſs.

Corrections in the Ring-turns.

For the Corrections in theſe large Rings, they be divers; as namely, the Bridle, the Spur, and the Rod, and ſometimes the voyce, yet that but ſeldome; for the Bridle, you ſhall correct your Horſe therewith if he carry his Head or Chaps awry, making as it were Mouths and ill-favoured countenances, giving him now and then a little check in the Mouth, and awaking him from ſuch forgetful paſſions, or now and then drawing the trench to and fro in his Mouth, which will reform the errour; then the Spur which muſt be laid ſharp and hard to his ſides, when you find your helps will do no good, but that his ſloath rather more and more encreaſeth, or when he preſſeth and hangeth hard upon your hand or looſeth the tutch of his rein, or ſuch like vices; for the Rod, when you find that he neglecteth the ſhewing or ſhaking of it, or when he diſordereth any of his hinder parts and will not gather them up comely together, then you ſhall therewith give him a ſound laſh or two under the Belly, or over the contrary Shoulder, and to any of theſe former Corrections you

you ſhall ever accompany the threatning of your voyce, when the fault is too much fou e, and no otherwiſe, becauſe there ſhould be ever entire love betwixt the Horſe and the Horſe-man, which continually chiding will either take away or at leaſt root out the apprehenſion thereof.

Cheriſhings in his Ring-turns.

Now for your Cheriſhings, they are thoſe which I formerly ſpake of; only they muſt be uſed at no time but when your Hor.e doth well, and hath pleaſed your mind, both with his cunning and tractableneſs: although the time for the ſame be when he hath finiſhed his Leſſons, yet there is a ſecret pleaſing and cheriſhing of a Horſe with the Bridle, which muſt be exerciſed in the doing of his Leſſons, and that is the ſweetning of his Mouth by a little ceaſing of your Bridle hand, and gently drawing it up back again, letting it come and go with ſuch unperceiving motion, that none but the Beaſt may know it.

Of ſtopping and going back.

When your Horſe can trot and gallop your large Rings with all perfectneſs, which with good induſtry will be perfected in leſs than a fortnights exerciſe, you ſhall then proceed to make him ſtop fair, comely, and without danger, which you ſhall do in this manner: Firſt, as ſoon as you have taken his back, cheriſh him, put him gently forward, and bring him into a ſwift trot: after you have trotted him forty or threeſcore yards forward, you ſhall by drawing in your Bridle hand ſtraitly and ſuddenly, make h'm gather his hinder Leggs and fore-Legs together, and ſo in an inſtant ſtand ſtill, which as ſoon as he doth, immediately you ſhall eaſe your hand a little, yet not ſo much as may give him liberty to preſs forward, but rather to yeild backward, which if you finde he doth, you ſhall give him more liberty, and cheriſh him, and then having pauſed a while, draw in your Bridle-hand, and make him go back two or three paces, at which if he ſtrike, inſtantly eaſe your hand, and draw it up again, letting him come and go till hee yeild and go backward, which (for the moſt part) all Horſes at the firſt will do: but if it be that your Horſe rebel and will not go back with this gentle admonition, you ſhall then cauſe a Foot-man ſtanding by to put him back with his hand, and in this motion, you ſhall cheriſh him, that he may underſtand what your will is. And thus every time you make him ſtop, you ſhall make him retire back, till in one ſpace of time you have made both

Leſſons

Leſſons perfect : and this practiſe you ſhall uſe both till you come to your large Rings, and at every time that you finiſh your Leſſon, or give the Horſe breath or eaſe, whereby you ſhall perceive that your Horſe ſhall learn to trot and gallop the large Rings, to ſtop and retire back all in one ſpace of time, becauſe you ſee ſucceſſively they follow one another, and are to be done (though three) but as one entire Leſſon.

Helps. Now for the helps in theſe Leſſons, the beſt for ſtopping is the choice of ground, as by making your Horſe ever to ſtop down the ſloap of ſome hil, or deſcending ground, whereby he may be compell'd to couch his hinder loyns the better, and ſo make him ſtop moſt comely, and to obſerve that the ground be firm and hard, without danger of ſliding, leſt the Horſe finding ſuch an imperfection grow fearful, and ſo refuſe to do your will out of his own danger, In retiring you ſhall help him with your Rod, by putting it before his Breſt, or ſhaking it before his Knees, to make him remove his Feet more quick and nimbly.

Corrections For Corrections in ſtopping, it muſt ſometimes be done by your ſelf, as with the even ſtroke of your Spurs, when in his ſtop he diſordered his Head, or with any one ſingle Spur, when he caſteth out his hinder loyns, and will not ſtop right in an even line ; and ſometimes it muſt be done by another by-ſtander, where he refuſeth to ſtop at all, who ſtanding at the place of ſtop, as ſoon as you draw up your hand, ſhall with his Rod threaten the Horſe and make him not dare to preſs forward, or if he do preſs forward, to make him retire ſwiftly back ſo much ground as he gained, both your ſelf and the by-ſtander, rating him with your voices extreamly : for corrections in retiring, they are the even ſtrokes of both your Spurs, when he ſticks or preſſes upon your hand, and will not yeild back ; and alſo your Rod ſtruck ſharply on his Knees and Breaſt, and Rod of a by-ſtander ſtruck upon his Breſt, Knees and Face, when his ſtubbornneſs is too violent.

Cheriſhings. But for his cheriſhings, they be all formerly ſpoke of, when your will is comely and obediently performed, beſides the addition of ſome other, as a preſent eaſing of your Bridle hand, and the ſuffering and cheriſhing of the by-ſtander, and ſo offering him to ſtand and recover breath a good ſpace after.

Wher

When your Horſe can ſtop and retire well, which may be done in the ſame ſpace that you teach him in his large Ring turns, for it is as it were three Leſſons learn'd in one; you ſhall then teach him to advance before when he ſtoppeth, which is very comely and graceful to the beholders; and you ſhall do it in this manner: After you have ſtopped your Horſe, without giving your hand any eaſe you ſhall lay the Calves of both your Legs hard to his ſides, and add thereto the noiſe of the ſhaking of your Rod, and your voice, by crying *up, up*, which will at firſt (peradventure) but a little amaze him, becauſe he underſtandeth not your meaning: Therefore you ſhall put him forward again, and do as before, and that with a little more ſtrength, continuing the practiſe of the ſame till you perceive hee taketh one Foot from the earth, then cheriſh him a little, and ſo to the Leſſons again, till hee taketh up both his Legs from the ground which when he doth, orderly or diſorderly, yet cheriſh him exceedingly, that he may come to the knowledge of your meaning, without which all your labour is loſt; then to your former practiſe again, till you have brought him to that perfectneſs, that he will with all readineſs advance as oft as you will give him the Calves of your Legs to his ſides, be it leſs or more times together: this done, you ſhall look to the orderly and comlineſs of his advancing: As firſt, that he takes up his Legs both even together, and bend them inward towards his Body; then that he advance not too high (for fear of comming over upon you) but couch his hinder loyns cloſe to the ground; then that he ſprauleth not, nor paweth with his Feet forward; and laſtly that hee advance not for his own pleaſure, but when you command him by your own direct and orderly motions, for the contrary is a foul fault in Horſemanſhip. Of advancing before.

For helps in this Leſſon, they are the Calves of your Legs, the ſhaking of your Rod over his Head, and your voyce, as is before ſaid, and the deſcent of ſome hanging ground, which will make his hinder loyns couch the better. Helps.

The Corrections are according to the nature of offences, as the even ſtroke of your Spurs, or a good laſh with your Rod, when you ſee, hee fixeth his Feet to the ground, and ſtubbornly applyes himſelf to diſobey you, or will take up his Feet one after another, Corrections.

ther, and not both together. If he do advance too high, ſo as he is ready to come over upon you, or if hee ſpraule or paw forth with his feet, you ſhall not then only give him both your ſpurs hard together, but alſo a good jerke or two with your Rod betweene his ears: but if he advance when you would not have him, you ſhall then in the ſame inſtant jerke him over both the knees with your Rod; and if he advance again, jerke him again, not ceaſing till he fix his feet to the ground, or go backward, and then cheriſh him.

Cheriſhings

For particular cheriſhings in this Leſſon, they are no other than thoſe former ſpoke of, onely they muſt be done with a more ready watchfulneſs, in the very inſtant and moment of time, in which he performeth any thing well, that the Horſe may underſtand why, and wherefore he receiveth ſuch contentment, and thereby be incouraged to continue in his goodneſs, and be more ready to apprehend his Riders pleaſure.

The uſe of advancing.

For the uſe of advancing, it is twofold; as namely, to give a grace to his other Leſſons, and to bring his Body to nimbleneſs: yet for the moſt part it is only us'd at the ſtop; where when you have finiſh'd any Leſſon, if then concluding with the ſtop, you make him advance, once, twice or thrice, it will be both a grace to the Beaſt, and ſhew much art in the Horſeman: alſo it maketh a Horſe apt and ready to turn well, and making him truſt to his hinder Legs, whereby his fore parts may be directed and governed at the Horſemans pleaſure.

Of yerking behind.

Next to advancing, you ſhall teach your Horſe to yerke behind, in this manner: When at any time you have made him ſtop, you ſhall preſently with your Rod give him a good jerk under the Belly near to his flanke, which though at the firſt hee apprehended not, yet by a continuall and conſtant uſe thereof you ſhall in the end bring him to yerk out his hinder Legs; at the firſt doing whereof, you ſhall cheriſh him, for that is the only language by which he knoweth he doth your will, and then having pauſed a little, make him to do it again, encreaſing it every day, and doubling his doings, till he be ſo ready, that when you pleaſe to give the jerke, he will then give the yerk, and then you ſhall look to the comelineſs of his doings, that is to ſay, that he yerk not out his hinder-Legs, till his fore-Legs be above the ground

ground, then that he yerk not one Leg farther out then the other, but both even together; then that he yerk not too high, and laſtly, that he yerk not one Leg out whileſt the other is on the ground; all which are errours of great groſsneſs. Therefore to make the Horſe more perfect in this Leſſon, it ſhall be good to teach him to yerk out behind, when he ſtandeth in the Stable, by jerking him on the buttocks with your Rod, and not ceaſing to moleſt him till he raiſe up his rump above the ground, and then to cheriſh him, and ſo to apply him without any eaſe and reſt, till he doth your will; that when he is perfect to put the ſame in practiſe when you are in the field on his back, by turning your Rod in your hand to his Buttock-ward, and touching him therewith, to make him yerk as aforeſaid.

For the helps, they are the conſtant ſtaying his Mouth on the Bridle, the ſtroke of your Rod under his Belly, or the gentle touching him upon the rump with the ſame. Helps.

The corrections are only the even ſtroak of your Spurs, when either he refuſeth to yerk, or yerketh out diſorderly, or out of malice; or the Single Spur on that ſide on which he yerketh out moſt diſorderly: and laſtly, a reſtleſs holding of him to the Leſſon, not giving him any reſt or eaſe, till he doth in that manner which you can wiſh. Corrections.

Then for his cheriſhings, they are all thoſe formerly mentioned, being beſtowed upon him in the very inſtant of his well doing. Cheriſhings.

When your Horſe is perfect, in all the Leſſons formerly ſpoke of, and underſtandeth the helps and corrections belonging to the ſame, you ſhall then teach him to turn readily on both hands, by ſtraitning his large Rings, and bringing them into a much leſs compaſs, and although among Horſemen, and in the Art of Horſemanſhip, there are divers and ſundry turns, ſome high and loſty as the turn upon the *Corvet*, *Capriole*, or on bounds, ſome cloſe and near the ground, as the turn *Tarra*, *Tarra*, or thoſe we call *Caragolo*, *Serpeigiare*, and ſuch like; and ſome ſwift and flying, as the *Incavellere*, *Chambetta*, and ſuch like; yet ſith they all labour but to one end, which is to bring an Horſe to an exact ſwiftneſs and readineſs in turning, I will in as brief and plain manner as I can, ſhew you how to compaſs the ſame. Firſt, therefore, you ſhall make out a Ring, ſome three or four yards in com- Of turning.

paſs and in the ſame, with all gentleneſs a while, walk your Horſe, ſuffering him to go the ſame at his own pleaſure, gathering his Head up by little and little, and making him take pleaſure in the ſame, till you find that he taketh knowledge of the Ring, and will with all willingneſs make about the ſame, coveting rather to ſtraiten it, than inlarge it; which perceived, you ſhall then carry your Bridle hand conſtant and ſomewhat ſtrait, yet the outmoſt Rein ever ſomewhat more ſtrait than the inmoſt, making the Horſe rather look from the Ring than into the Ring, and the Calfe of your Leg (as occaſion ſhall ſerve) ſomewhat near to the outward ſide of the Horſe, and then you ſhall trot him about the Ring, firſt on the one ſide, and then on the other, making your changes within that ſtrait Ring, as you did before within the large Ring.

And in this ſort without ceaſing, you ſhall exerciſe your Horſe a full hour together, then ſtop him, make him advance twice or thrice together, then retire in an even Line, and ſo ſtand ſtill a pretty while and cheriſh him; then when he hath taken freſh breath to him again and do as before, continually labouring by raiſing up his Bridle-hand, and thruſting forward your Legs and Body, to bring his trot to all the ſwiftneſs and loftineſs that may be, and your changes to do them ſo readily, and roundly as may be: alſo making him to lap his outmoſt Leg ſo much over his inmoſt Leg, that he may cover it more then a Foot over, and thus you ſhall exerciſe him a whole forenoon at leaſt a week together, only doing his former Leſſons but once over in a morning and no more, and in this practiſe you teach him perfectly three Leſſons together, that is the turn *Terra*, *Terra*, the *Incavalere*, and the *Chambetta*: the turn *Terra*, *Terra*, in the outmoſt circle of the ſtrait Ring, and the *Incavalere* and *Chambetta* in the changes, wherein he is forc't to lap one Leg over another, or elſe to lift up the inmoſt Leg from the ground, while he brings the outmoſt over it: and ſurely in this Ring and theſe changes, conſiſteth the main Art of turning, and the cheifeſt glory both of the Horſe and the Horſeman: and therefore it is meet for every Rider to think this Leſſon never perfectly learnt, and therefore continually to practiſe his Horſe in the ſame, making him not onely tread and trot theſe narrow Rings, but alſo gallop them, and from

galloping

gallopping them to pass them about in ground-salts, as by taking up his fore-Legs from the ground both together, and bringing his hinder Feet into their place, and so passing the Ring about once or twice or thrice, at your pleasure, or as oft as the Horses strength and courage will allow: and this is the true turn, called *Terra, Terra*, and of greatest request with Horsemen, and likewise with Souldiers; and this *will every Horse naturally and easily be brought unto: only by a continual trotting and gallopping of these narrow Rings. Thus you see the perfectness of your large Rings, brings your Horse to an easie use of the strait Rings; and the easie knowledge of the strait Rings brings a Horse to the perfection of turning, which is the ground and maine summe of this Art, a stopping begets retiring, and retiring advancing. Thus every Lesson as it were a chain, is linkt one to another.*

The helps belonging to turning, are all whatsoever are formerly spoken of because it is a Lesson, *which besides that it containeth in it self all other Lessons, so it must be done with more courage, Art, and nimbleness, then any else whatsoever*; *and* therefore the Horse had need of all assistance that can possibly be given him. Helps.

The corrections are the Spurs given on the outmost side, when the Horse sticks, aud is harder to come about on the one side, then on the other, and the Rod striken hard on the outmost side of the offending Member, as also a continual labour, when the Horse shewes either unwillingness or disobedience touching the unnimbleness of his turning, when he beats one Leg against another, or treads one Foot upon another, the raps and hurts he doth himself, are sufficient corrections; and will both make him know his fault and amend it. Corrections.

For his cherishings, they are also the former already spoken of, *yet to be used (if possibly) with greater earnestness, in as much as this Lesson being most cunning; would for the performance thereof ever receive the most comfort.* Cherishings.

Your Horse being brought to this perfection, that hee will perfectly tread his large Rings, stop, retire, advance before, yerk behind, and turn readily on either hand, you shall then take away his Musrole and Trench, and in stead thereof put upon his Head a gentle Cavezan or two joynts and three pieces, with a

chap-band underneath, which you ſhall buckle cloſe, but not ſtreight, and be ſure that the cavezan lye upon the tender griſſel of the Horſes Noſe, ſomewhat near to the upper part of his Noſtrils; then to the chap-band you ſhall faſten the Martingale, and laſtly to the rings on each ſide the cavezan, you ſhall faſten long divided reins, more then a yard and a half in length a piece, then into his Mouth you ſhall put a ſweet ſmooth Cannon bit, with a plain watering chain, the cheek being of large ſize, ſo it may arm a little above the point of his Shoulder; and the kirble ſhall be thick, round and large hanging looſely upon his nether Lip, and inticing the Horſe with his Lip to play with the ſame. Thus armed you ſhall take his back, and caſting the left reine of your cavezan over the Horſes right ſhoulder, you ſhall bear it with your thumb, with the reins of the bit in your left hand; and the right reins of the cavezan you ſhall caſt over the Horſes left Shoulder, and beare it with your Rod in your right hand, and ſo trot him forth the firſt morning out right a mile or two in the high-way, making him onely feel and grow acquainted with the bit, and onely making him now and then ſtop and retire, and gathering up his Head in a due place, and faſhioning his rein with all the beauty and comlineſs that may be, which done the next day you ſhall bring him to his large Rings, and as was before ſhewed, there make him perfect with the bit as you did with the ſnaffle at firſt in trotting, then in galloping of the ſame, then make him ſtop, retire, advance, yerk behind, and come upon their hand with a great deal more perfectneſs, and more grace then was formerly done with the trench, which is an eaſie labour, in as much as the bit is as much better command, and brings more comelineſs to the Horſes motions, is alſo a greater help, a ſharper correction, and cheriſher of more comfort then any before uſed. And thus in the firſt moneth you may make any Horſe perfect upon the trene in the Leſſons before ſpoke of, ſo in the ſecond moneth you may make the ſame Leſſons a great deal more perfect upon the bit, and ſo preſume in two moneths to have a perfect ground Horſe, fit either for Souldier or Schollar, that hath any good rules of horſman-ſhip in him.

Of the turning Poſt.

Now for as much as the Art in turning in Horſes is of great difficulty, and ought of all Leſſons to be moſt elaborate, I will ſpeak

ſpeak a little further thereof, and ſhew you the practiſe of theſe preſent times, for the beſt accompliſhment of the ſame, without ſtirring up evil motions in the Horſe, whence Reſtiveneſs, and other vile errours do grow; for it is certain that every Horſe naturally deſireth neither offence, nor to offend; but the raſh diſcretions of ignorant horſmen, which will compel a Horſe to do, before he know what, or how to do, is the begetting of thoſe evils which are hardly or ever reclaimed; for a Horſe is like an ill-brought-up Boy, who having learnt drunkenneſs in his youth, will hardly be ſober in his age, and having once got a Knaviſh quality, though he be never ſo much puniſhed for the ſame, will yet now and then ſhew that the remembrance is not utterly extinguiſhed; and for as much as in this Leſſon of ſtrait turns, there is ſo much curious hardneſs that a Horſe is moſt ſubject to rebel, and learn many evils thereby, therefore to prevent all thoſe evils, you ſhall cauſe a ſmooth ſtrong poſt to be well ram'd, and fixed in the earth in the midſt of the ſtrait-ring, at the very point and center thereof, then cauſing a Foot-man to ſtand at the poſt, you ſhall give him the right rein of your Cavezan, which you ſhall make him hold about the poſt, and ſo walk or trot your Horſe about the ſame on your right hand as long as you pleaſe, then taking up the right rein, give him up the left rein, and do as much upon the left hand, and thus change from hand to hand, as oft as you ſhall think convenient, till you have brought your Horſe to the abſolute perfection of every turn, the Poſt being ſuch a guide and bound unto the Horſe, that albeit the Horſman were of himſelf utterly ignorant, yet it is impoſſible the Horſe ſhould either diſorder or diſobey the Riders purpoſe.

When your Horſe can thus perfectly for every ſeveral turn either ſtrait, or open with his bit, you ſhall then teach him to manage, which is the only poſture for the uſe of the Sword on Horſeback, and you ſhall do it in this manner: Firſt, cauſe ſome by-ſtander to prick up in the earth two riding Rods, about twenty or forty yards or more, as you think good, diſtant one from the other; then walk your Horſe in a ſtreight turn or Ring about the firſt on your right hand, and ſo paſſing him in an even furrow down to the other Rod, walk about it alſo in a nar- Of managing.

row

row Ring on your left hand, then thrust him into a gentle gallop down the even furrow, till you come to the first Rod, and there making him (as it were) stop, and advance without any pause or intermission of time; thrust him forward again, beat the turn *Terra, Terra*, about on your right hand, then gallop forth right to the other Rod, and in the same manner beat the turn about on your left hands; and thus do as oft as you shall think it convenient for your own practice and the Horses strength.

Diversities of Manages.

Now of these manages, our ancient Masters in Horsemanship have made divers kind, as manage with rest, and manage without rest, manage with single turns, and manage with double turns, which indeed doth rather breed confusion, than understanding in either the Horse or Horseman: Therefore for your better knowledge, I will reduce them only but to two kinds, that is manage open and manage close: your open manage is that which I shewed you before, when you turn *Terra, Terra*, which is the most open of all strait turns: and your close manage is when you turn upon the *Incavalere* or *Chamletta*, which are the closest of all turns, and may be done as before I shewed in a flying manner, even upon one Foot, which although it be artful, yet it is not so glorious and safe for the Souldiers practice, only, this you may be most assured of that when a Horse can manage upon both these turns, he may manage without more instruction, upon any other turn whatsoever.

Of the career.

When your Horse is perfect in the manages before said, you may then pass a *career* at your pleasure, which is to run your Horse forth-right at his full speed, and then making him stop quickly, suddenly, firm and close on his Buttock: in which Lesson there needeth little instructions, but only some few observations, as first, that you make not your *career* too long, whereby the Horse may be weakned; or too short, whereby his true wind and courage may be undiscover'd, but competent and indifferent, as about four or fivescore yards at the most: then that you start him gently without a fright: and lastly, that you first give him a little warning with your Bridle-hand, and then stop him firmly and strongly; which place of stop, if it be a little bending downwards, it is a great deal the better. And thus in these Lessons already shewed you, consisteth all the full perfection

fection of a Horse for service in the Warres, which any painful man may bring his Horse well unto, in less then three Moneths: how ever our Ancients in former times have been blind, and in the same practice have wasted two years, ere they brought it to perfection.

Now forasmuch as to the Art of riding, belongeth divers other Salts and Leaps, right pleasant and curious to behold; and though not generally used in the Wars, yet not utterly useless for the same; and sith, they are many times very needful for the health of Mans Body, I will by no means abridge our English Husband-man of the same, but proceed to the Lessons, which are meet for Horses of pleasure, of which the first is to make a Horse bound aloft with all his four Feet from the ground, and you shall do it in this manner; When you have trotted your Horse forth-right a dozen or twenty yards, you shall stop him, and when he hath advanced once or twice, you shall a little straiten your Bridle-hand, and then give him the even stroke of both your Spurs together hard, which at first will but only quicken and amaze him, but doing it again and again, it will breed other thoughts in him, and he being of Spirit and Mettal, (as it is lost labour to offer to teach a Jade such motions) he will presently gather up his Body, and either rise little or much from the ground, then presently cherish him, and after some rest, offer him the like again, and thus do till you have made him bound twice or thrice, then make much of him, and do no more for that day; the next day renew his Lesson again, and double his exercise increasing so day by day, till he come to that perfectness, that he will bound whensoever your Spurs shall command him.

Horses for pleasure.

Of bounding aloft.

When your Horse can bound perfectly, then you shall teach him the Corvet in this manner: You shall at the corner where two Walls joyn together, a little hollow the ground a Horses length or more, and then place a smooth strong Post by the side of the hollowness of a Horses length likewise from the Wall; then over against the Post, fasten an Iron Ring in the Wall; this done, Ride your Horse into the hollow place, and fasten one of the Reins of the Cavezan unto the Ring, and the other about the Post, then after you have cherished your Horse, make him advance

Of the Corvet.

advance, by the help of your Calves of your Legs onely twice or thrice together; then let him ſtand ſtill and cheriſh him, then make him to advance again at leaſt a dozen times together, then reſt, and after advance twenty or forty times together, dayly increaſing his advancings as he grows perfect therein, till you perceive that he hath got ſuch a habit therein that he will by no means preſs forward, but keeping his ground certain, advance both before and behinde of an equal height, and keep one juſt and certain time with the motions of your Legs, neither doing ſlower nor faſter, but all after one manner and leaſure: but if you find that he doth not raiſe his hinder parts high enough, then you ſhall cauſe a Footman to ſtand by you, and as you make him advance before, ſo the Footman by jerking him gently upon his hinder fillets with his Rod to raiſe up his hinder parts alſo; this will bring your Horſe in few dayes to a perfect and brave Corvet, ſo that after you may do it in any place where you pleaſe without the help either of Wall or Poſt, or other by-ſtander.

Of the gallop Galliard.

When your Horſe is made perfect in the Corvett, and that he will do it readily and comely, you ſhall at the end of every third or fourth advancing, give him the ſtroak of your Spurs, and make him bound aloft; then put him to his Corvet again as before, and then make him bound again; and thus at the end of every third advancing, ſee you make him bound for the length of a tilt bar, or an ordinary managing furrow, according to the Horſes ſtrength, and this is called the *gallop galliard*, which if it be taught a Horſe along by the ſide of ſome Wall or ſmooth Pale, it is ſo much the better, and a great deal fewer diſorders will riſe and trouble the Rider.

Of the Capriole.

The next Leſſon you ſhall teach your Horſe after the gallop galliard is the *Capriole* or Goats leap, which is the ſame manner of motion which the Corvet is, onely it is to be done forward, and much ground gained in the Salt, and the Horſe is to raiſe his hinder parts as high, or rather higher then his fore-parts, and to keep rather a ſwifter then ſlower time in doing of it; therefore when you teach your Horſe to do it, you ſhall bring him into ſome hollow furrow, where the ground is a little deſcending, and turning his Head to the deſcent, put him into the Corvet temperate and gently, then when you give him the Calves of your Legs

legs to raise up his fore parts, in the same instant jerk your leg violently forward again, that he may not stick, but carry his hinder-legs after his fore-legs, and let some skilful foot-man standing by your side, jerk the horse over the fillets with his rod, and make him raise up his hinder parts; and thus do without ceasing, till he perform your will nimbly and cunningly, and then forget not to cherish him, and give him all comfort possible. And this lesson and the other which consist of violent and quick saults or leaps, would ever be practised the first in the morning whilest a Horse is fresh and lusty, for to put him to them after his fire-edge is taken away, will but bring him to a loathing of his instruction, or at best to do them but slovenly, heavily, and unwillingly.

Of going aside.

There is also another motion which is pleasing to the eye, though it be very labourSome to the body, which is to make a Horse go side-long of which hand soever the Rider is disposed, and is very necessary in the wars, because it is the avoiding of any blow coming from the Enemy. This motion when you intend to teach your Horse, you shall draw up your bridle hand somewhat strait, and if you determine to have him go aside to your right hand, lay your left Rein close to his neck, and the calve of your left leg close to his side, and as you did in the *Incavalere*, making him lap or put his left leg over his right, then turning your Rod backward, and jerking him gently on the left hinder thigh, make him bring his hinder parts to the Right side also, and stand in an even line as at the first, then make him remove his fore-parts more than before, so that he may stand, as it were, cross over the even line, and then make him bring his hinder parts after, and stand in an even line again; and thus do, till by long practise he will move his fore parts and hinder parts both together, and go side-long as farre as you please, then cherish him, and if you will have him go towards your left hand, do as you did before, using all your helps and corrections on the right side only. And thus much I think is sufficient to have spoke touching all the several Lessons meet to be taught to any Horse whatsoever, whether he be for service or for pleasure, and which being performed artificially, carefully, and with patience, you may presume your Horse is compleat and per-

perfect, the rather ſith no man can find out any invention, or teach any other motion to a Horſe, which may be good and comly, but you ſhall eaſily perceive, that they are received from ſome one of theſe already rehearſed.

Riding before a Prince.

Now if you ſhall be called to Ride before a Prince, you muſt not obſerve the liberty of your own will; but the ſtate of the perſon before whom you Ride, and the grace of the horſe which you ride; and therefore being come into the riding place, you ſhal chuſe your ground, ſo that the Perſon before whom you are to ride may ſtand in the midſt thereof, ſo as he may well behold both the paſſage of the Horſe to him and from him: then being ſeated in a comely order, and every ornament about you handſome and decent, you ſhall put your Horſe gently forth into a comely trot, and being come againſt the Perſon of ſtate, bow your body down to the creſt of your Horſe, then raiſing your ſelf again, paſs half a ſcore yards beyond him, and there marking out a *narrow Ring*, thruſt your Horſe into a gentle gallop, and give him two or three managing turns, in as ſhort ground as may be, to ſhew his nimbleneſs and readineſſe: then upon the laſt turn, his face being toward the great perſon, ſtop him comely and cloſe, and make him to advance twice or thrice; then having taken breath, put him into a *gallop galliard*, and ſo paſs along the length of the even *furrow* with that ſalt, making him to do it alſo round about the *Ring*; then his face being towards the Prince, ſtop him and give him freſh breath, then thruſt him into the *Capriole*, now and then making him yerk out behinde, yet ſo as it may be perceived it is your will, and not the Horſes malice; and having gone about the Ring with that ſalt, and his face brought to look upon the *Prince*, ſtop him again and give him breath: then drawing nearer to the Prince, you ſhall beat the turn *Terra Terra*, firſt in a pretty large compaſs, then by ſmall degrees ſtraitning it a little and a little, draw it to the very center where you may give two or three cloſe flying turns, and then changing your hands undoe all that you did before, till you come to the Rings firſt largeneſs, then the Horſes face being direct upon the *Prince* ſtop him, and put him into a corvet, and in that motion hold him a pretty ſpace, making him to do it firſt in an even line, firſt to the right hand, then to the left, now backward

Of the Caragoſo.

ward, then forward again: and thus having performed every motion orderly and comely, bow down your body to the Prince, and so depart.

But if you intend to Ride only for Recreation, then you shall mark what Lesson your Horse is most imperfect in, and with that lesson you shall ever when you ride both begin and end; after it you shal fall to those lessons which are to your self most difficult, and by the practise of them bring your self to a perfectness, then consequently to all other lessons, repeating (as it were) every one over more or less, lest want of use breed forgetfulness, and forgetfulness utter ignorance; but if your Recreation in Riding be tyed to any special rules of health, and that your practise therein proceed more from the Commandment of your Physitian than your pleasure, then I would wish you in the morning first to begin with a stirring, or rough Lesson, as the *gallop galliard*, *bounding*, or such like, which having a little stirred your blood, and made it warm, you shall then calm it again with a gentle manage, or the galloping of large Rings; then to stir your spirits again, to bring the stone down, or procure appetite, pass into the *capriole* or *corvet*; and then to make quiet those moved parts, set the turn called, *Terra, Terra*, the *Incavalere*, and such like. And thus one while stirring your blood, and another while moderately allaying such stirring, you shall give your body that due and proper exercise which is most fit for health and long life. Many other waies this Recreation may be used for the good of a mans body, which because particular infirmities must give particular rules how and when to use it, I will at this time speak no further thereof, but refer the exercise to their own pleasures which shall practice the same, and to the good they shall finde in the practice.

To ride for recreation.

CHAP. III.

Of the breeding of all sorts of Horses fit for the Husbandmans use.

THe mindes of men being swayed with many various motions, take delight sometimes to be recreated rather with contemplative delights, then with active pleasures, and there is

ſtrong reaſon therefore, becauſe diſability of body, or affairs of the Kingdome or common-wealth, may take a man from thoſe pre-occupations, which otherwiſe might ſtir him to more laborious exerciſe; and of theſe contemplative Recreations. I can prefer none before that Gentlemanly and beneficial delight of breeding creatures meet for the uſe of man, and the good of the Common-wealth, wherein he liveth: and of theſe breedings I cannot eſteem any ſo excellent, as the breeding of Horſes, both for the pleaſure we gain thereby in our own particular ſervice, and alſo for our ſtrength, defence, and tillage of the Kingdome.

The breeding of Horſes.

He therefore that ſuteth his recreation to the breeding of horſes muſt firſt have reſpect unto the ground whereon he liveth or injoyeth; for every ground is not meet to breed on, but ſome too good, ſome too bad: ſome too good, becauſe they may be exhauſted to a more beneficial commodity, Horſes having a world of caſualties attending on them, and many years before the true profit doth ariſe: and ſome too bad, becauſe the extream barrenneſs of the ſame will deny competent nouriſhment to the thing bred, and ſo to the loſs of time and profit adde mortality.

Grounds to breed on.

The grounds then meet to breed horſes on, would neither be extream fruitful, nor extream barren, but of an indifferent mixture, yield rather a ſhort ſweet burthen, then a long, rich and fruitful, it would rather lye high than low, but howſoever firm and hard under the foot; it would be full of Mole-hills, uneven treadings, hills, and much craggineſs, to bring Colts to nimbleneſs of foot, it would have good ſtore of freſh waters, an open ſharp ayr, and ſome convenient covert; and this ground is beſt, if it be ſeveral and incloſed, yet may be bred upon, though it be open, and in common, only ſome more carefulneſs to be looked for, a little before, and in the time of Foaling. Nay, the grounds which are neither ſeveral nor common, are very good alſo to breed on, and thoſe be your teathering grounds, which we call particular grounds; for though they be proper commonly to one man, yet they are not divided nor eaten otherwiſe than at the owners pleaſure: And theſe teathering grounds are as good as any grounds for the firſt nouriſhing of a Foal, if they

be

be amongst Corn-grounds or any grain except peaſe only.

If you have much ground to breed on, you ſhall divide it into many paſtures, the leaſt and barrenneſt for your Stallion to run with your Mares in, thoſe which have leaſt danger of waters are for your Mares to foal in, the fruitfulleſt and of beſt growth, for your Mares to give milk in; and the moſt ſpacious and uneveneſt to bring up your Colts in, after they are weaned. Diviſion of grounds.

For the choice of a good Stallion, and which is beſt for our Kingdome, opinion ſwayeth ſo far, that a man can hardly give well received Directions: yet ſurely if men will be ruled by the truth of experience, the beſt Stallion to beget horſes for the Wars is the *Courſer*, the *Jennet*, or the *Turks*; the beſt for courſing and running is the *Barbary*; the beſt for hunting is the *Baſtard courſer* begot of the *Engliſh*; the beſt for the Coach is the *Flemiſh*, the beſt for travel or burthen is the *Engliſh*, and the beſt for eaſe is the *Iriſh hobby*. Choice of Stallions and which are beſt.

For the choice of *Mares*, you ſhall greatly reſpect their ſhapes and mettals, eſpecially that they be beautifully fore handed for they give much goodneſs to their Foils: and for their kindes, any of the *Races* before ſpoken of is very good, or any of them mixt with our true Engliſh *Races*, as *Baſtard-courſer*, *Mare*, *Baſtard-Jennet*, *Baſtard-Turk*, *Barbary*, *&c.* Choice of Mares.

The beſt time to put your Stallion and Mares together is in the middle of *March*, if you have any graſs, as you ſhould have great care for that purpoſe, and one foal falling in *March*, is worth two falling in *May*, becauſe he poſſeſſeth, as it were, two winters in a year, and is thereby ſo hardened, that nothing can (almoſt) after impaire him, and the beſt time to take your horſe from the Mares again, is at the end of *April*, or middle of *May*, in which you ſhall note, that from the middle of *March*, till the midſt of *May*, you may at any time put your Stallions to your Mares, and a months continuance is ever ſufficient: provided ever, as near as you can, that you put them together in the increaſe of the Moon; for Foals got in the wane are not accounted ſtrong or healthful. When to put them together.

For covering of Mares, it is to be done two waies, out of hand, or in hand; out of hand, as when the Horſe and Mares run together abroad, as is before ſaid; or turned looſe into ſome Of covering Mares.

empty

empty barn for three nights one after another, which is the ſureſt and the ſafeſt way for a Mares holding; or in hand, early in a morning, and late at an evening two or three daies together, when you bring the Horſe to the Mare, and make him cover her once or twice at a time holding him faſt in your hand, and when the act is done, lead him back to the ſtable; and in this act you ſhall ever obſerve, as ſoon as the Horſe cometh from her back, preſently to caſt a pail of cold water on her hinder parts, or elſe to chaſe her ſwiftly, up and down, for fear, by ſtanding ſtill ſhe caſt out the ſeed, which is very ordinary.

To know if a Mare hold.

To know whether your Mare hold to the Horſe or no, there be divers waies, of which the beſt is by offering her the Horſe again at the next increaſe of the Moon, which if ſhe willingly receive, it is a ſign ſhe held not before; but if ſhe refuſe, then it is moſt certain ſhe is ſped, or if you powre a ſpoonful of cold vinegar into her ear, if ſhe ſhake only her head, it is a ſign ſhe holds; but if ſhe ſhake head, body and all, then truly it is a ſign that ſhe doth not hold: Laſtly, if after ſhe is covered, you ſee her ſcour, her coat grow ſmooth and ſhining, and that ſhe doth (as it were) renew and increaſe in liking, it is a ſign ſhe holds; but if ſhe hold at a ſtay without any amendment, then offer the Horſe again for ſhe is not ſerved.

To conceive Male foals.

To make your Mares conceive moſt male Foals, you ſhal be ſure to keep your Stallion proud, and your Mare poor, that his luſt maſtering hers, he may only be predominant and chief in the action: many other rules fancy deviſeth, but they erre in their ends, and I would by no means have this diſcourſe capable of any uncertainty.

To provoke luſt.

If you have any advantage given you by friendſhip, or otherwiſe whereby you may have a Mare at the preſent very well covered, only yours is not yet ready for the horſe, you ſhall in this caſe to provoke luſt in her, give her to drink good ſtore of clarified hony, and new milk mixt together, and then with a buſh of nettles all to nettle her privy parts, and then immediately offer her to the Horſe.

To keep Mares from barrenneſs.

To keep your Mares from barrenneſs, and to make them ever apt to conceive foals, you ſhall by no means feed too extream fat, but keep them in a middle ſtate of body by moderate labour,

bour, for the leaner they are when then they come to take Horſe, the much better they will conceive.

After your Mares have been covered, and that you perceive in them the marks of conceiving, you ſhall let them reſt three weeks or a month, that the ſubſtance may knit; then after, moderately labour or travel them, till you ſee them ſpring, and then turn them abroad, and let them run till they foal; for to houſe them after is dangerous and unwholſome. Ordering of Mares after covering.

If your Mare be hard of foaling, or will not cleanſe after ſhe hath foaled, you ſhall take a pint of running water, wherein good ſtore of fennel hath been boyled, and as much ſtrong, old, ſweet wine, with a fourth part of the beſt Sallet oyl, and having mixt them well together, being but luke warm, pour it into her noſtrils, and then hold and ſtop them cloſe, that ſhe may ſtrain her whole body, and it will preſently give her eaſe. A help for Mares after foaling.

As ſoon as your Mare hath foal'd, you ſhall remove her into the beſt graſs you have, which is freſh and unfoiled, to make her milk ſpring; and if it be early in the year, you ſhall have a care that there be good ſhelter in the ſame, and there let her nouriſh her foal moſt part of the ſummer following. Ordering of Mares after foaling.

As touching the weaning of foals, though ſome uſe to wean them at *Michaelmas*, or *Martlemas* following; out of a ſuppoſition that the winter milk is not good or wholſome, yet they are much deceived; and if you can by any convenient means, (ſaving greater loſſes) let your foals run with their Dams the whole year, even till they foal again, for it will keep the foal better in health, in more luſt, and leaſt ſubject to tenderneſs. Weaning of Foals.

When you intend to wean your foals, you ſhall take them from their Dams over-night, and drive them into ſome empty houſe, where they may reſt; and the Mares be free from their noiſes, then on the morning following give to every foal faſting a branch or two of *Saven* annointed or rold in butter, and then having faſted two hours after, give him a little meat, as graſs, hay, or garbadge of Corn, with ſome clear water, and do this three daies together; then ſeeing that they have forgotten their Dams, geld ſuch Colt foals, as you intend to make geldings of and after their ſwellings are paſt, put them unto your other Colt-foals Ordering after the weaning.

foals into a paſture provided for them by themſelves, and your Filly-foals into another by themſelves: which Paſtures may either be high Woods, Commons, or ſuch like ſpacious peeces of ground, where they may run till they be ready for the Saddle.

Gelding of Colts.

Now, albeit I proportion unto you this manner of gelding of Foals, yet I would have you know that the beſt and ſafeſt way to geld them is, if it may be under the Dam when they ſuck, as at nine, or at fifteen daies of age, if the ſtones appear, or elſe ſo ſoon as you can by any means perceive them fall down into the Cod, for then there will be no danger of ſwelling, or other miſchiefs, which commonly attend the action. And thus much touching the breeding of Horſes, and the obſervations due to the ſame through all the courſes and paſſages thereof, as hath been found by ancient practiſe and experience, as appears in my *Maſter-piece.*

CHAP. IV.

Of Horſes for travel, and how to make them amble.

THE Husbandman, whoſe occupation in the general affairs of the Conmon-wealth, as ſome to the market, ſome to the City, and ſome to the ſeats of Juſtice, muſt neceſſarily be imployed almoſt in continual travel; and therefore it is meet that he be provided ever of a good and eaſie travelling horſe.

The marks of a good travelling Horſe.

The marks whereby he ſhall chuſe a good travelling horſe, are theſe; he ſhal be of a good colour and ſhape, lean headed & round foreheaded, a full eye, open noſtril, wide jawed, looſe thropled, deep neckt, thin creſted, broad breaſt, flat chinn'd, out ribb'd, clean limb'd, ſhort joynted, ſtrong hoofed, well mettal'd, neither fiery nor craving, ſtrong in every member, and eaſie to mount and get up upon; he ſhall follow with haling, and ſtand ſtill when he is reſtrained.

To make a Horſe amble.

Now foraſmuch as there are a world of good horſes which are not eaſie, and a world of eaſie horſes which are not good, you ſhall by theſe directions following, make any horſe amble whatſoever: firſt, then you ſhall underſtand that practice hath made divers men believe that divers waies they can make a horſe amble,

amble as by gagging them in the mouths, by toyling them in deep earth, by the help of ſhooes, by gallopping and tyring, or ſuch like, all which are ill and imperfect; yet the truth is, there is but one certain and true way to compaſs it, and that is to make a ſtrong garth web, flat and well quilted with cotten, four paſterns for the ſmalls of his fore-legs, under his knees, and for the ſmalls of his hinder leggs ſomewhat below the ſpavin joynts: to theſe paſterns you ſhall fix ſtrong ſtraps of leather, with good iron buckles to make ſhorter or longer at pleaſure, and having placed them about his fore-legs, you ſhall take two ſeveral round ropes of an eaſie twiſt, made with ſtrong loops at either end, and not above eight handfuls in length, and theſe the horſe ſtanding to a true proportion, you ſhall faſten to the four ſtraps of leather, to wit, one of them to his near fore-leg, and his near hinder-legg, and the other to his far fore-leg, and his far hinder leg, which is called amongſt Horſemen trammelling; with theſe you ſhall let him walk in ſome incloſed piece of ground, till he can ſo perfectly go in the ſame, that when at any time you offer to chaſe him, you may ſee him amble ſwiftly and truly; then you ſhall take his back, and ride him with the ſame trammels, at leaſt three or four times a day till you find that he is ſo perfect, that no way can be ſo rough and uneven, as to compell him to alter his ſtroke or go un-nimbly. This done, you may firſt take away one trammel, then after the other, and onely wreath about under his fore-feet locks thick and heavy, great royls of Hay or Straw Ropes; and ſo ride him with the ſame a good ſpace after; for it will make him amble eaſie, then cut them away, and ride and exerciſe him without any thing but the ordinary help of the bridles, and there is no doubt but he will keep his pace to your full contentment and pleaſure.

Divers wayes of ambling.

Of trammelling.

Of whiſping.

Now during this time of your teaching, if your horſe ſtrike not a large ſtroak, and over-reach enough, then you ſhall make the trammel the ſtraiter; but if he over-reach too much, then you ſhall give it more liberty: and herein you ſhall find, that an inch ſtraitning, or an inch inlarging, will adde or abate at leaſt half a foot, an whole foot and direct ſtroak. And thus much touching the teaching of any horſe to amble, of what nature or quality ſoever he be, or how unapt or untoward ſoever to learn.

CHAP. V.

Of the ordering and dieting of the Hunting-Horse.

SOme love hunting for the exercise of their own bodies, some for the chase they hunt, some for the running of the Hounds, and some for the training of their Horses, whereby they may find the excellency of their goodness and indurance: To him therefore which placeth his delight in the goodness of his horse, I would wish him to order and diet him, and he shall most assuredly come to the true knowledg of the best worth which is within him; And if in these Rules which I now shew, I be less curious than formerly I have been, let no man wonder thereat, but know that time (which is the mother of experience) doth in our labours shew us more new and more nearer wayes to our ends, then at the first we conceived: And though when I first practised this Art, I knew not how to bring a very fat horse from *Michaelmas* till *Christmas*, to shew his utmost perfection, I know now in two moneths (though never so foul) how to make him for any wager, daring now boldly to adventure on that, at which before I thought almost present death to offer; thus doth observation and labour find out the darkest secrets in Art.

Taking up of the Hunting Horse.

To begin then with the first ordering of a Hunting Horse, you shall know, that the best time to take him from grass is about *Bartholmen-tide*, the day being fair, dry and pleasant, and as soon as he is taken up, to let him stand all that night in any vast house to empty his body, the next day stable him, and give him Wheat straw, if you please, but no longer in any wise; for though the old rule is to take up horses bellies with straw, yet it straitneth the Guts, heats the Liver, and hurteth the Wind: therefore let only moderate exercise, as riding him forth to water morning and evening, and other ayrings do what you expect straw should; and for his food let it be hay that is sweet though rough, and either old, or at least well sweat in the Mow.

Cloathing the Horse.

After his belly is emptied, you shall cloath him first with a single cloath, whilst the heat endureth, and after with more, as you shall see occasion require, and when you begin to cloath the horse, then shall you dress, curry and rub him also. Now for as much as it is a rule with ignorant Horsemen, that if they have but

but the name of keeping a Hunting horse, they will with all care (without any reason) lay many cloaths upon him, as if it were a speciall Physick, you shall know they are much deceived therein, and may sooner do hurt than good with multiplicity of cloaths; therefore to cloath a horse right, cloath according to the Weather, and the temper of his body; and thus if you see your horse be sleight, smooth and well coloured, then cloath him temperately, as with a single cloath of canvase or sack-cloath at the most; and if then as the year grows colder, you find his hair rise or stare about his neck, flanks, or outward parts, then you shall adde a woollen cloath, or more if need require, till his hair fall smooth again, holding it for your rule, That a rough coat shews want of cloath, and a smooth coat cloathing enough; yet if your horse have been clean fed, taken exercise sufficient, and hath not much glut within him, if then you find that in the night he sweateth in his cloaths, then it is a sign he is over-fed; but if he be foul inwardly, or hath no sweat formerly, and now sweats coming to good feeding, then you shall augment rather than diminish any cloathing for his foulness, but then breaketh out, and being evacuated, he will come to dryness of body again, and so continue all the year after; and surely for an ordinary proportion of cloaths, I hold a canvase cloath, and a cloath of House-wives Woollen to be at full sufficient for a Hunting Horse.

A Hunting Horse would be dreſt in his dayes of rest, twice a day, that is, before he go to his morning watering, and before he go to his evening watering; For the manner of his dressing after he is uncloathed, you shall first curry him from the tips of the ear, to the setling on of his tayl, all his whole body most entirely over with an iron comb, his leggs under the knees and cambrels only excepted; then you shall dust him, then curry him again allover with a round brush of Bristles, then dust him the second time, then rub all the loose hairs away with your hands wet in clean water, and so rub till the horse be as dry as at the first, then rub all his body and limbs over with an hair-cloath: Lastly, rub him over with a fine white linnen rubber, then pick his eyes, nostrils, sheath, cods, tuell, and feet very clean, and so cloath him, and stop him round with wisps, if you water within the

Of Dressing the Hunting Horse.

house; otherwise saddle him after his body is wrapt about in a Woollen cloath, and so ride him forth to the Water.

Of watering the hunting Horse.

The best water for a hunting horse, is either a running River, or a clear Spring, remote from the Stable a mile, or a mile and a half at most, and near unto some plain piece of ground, where you may scope and gallop after he hath drunk; and as soon as you bring your horse to the water, let him take his full draught without trouble or interruption: then gallop and scope him up and down a little, and so bring him to the water again, and let him drink what he please, and then gallop him again: And thus do, till you find he will drink no more; then having scop't him a little, walk him with all gentleness home, and there cloath him up, stop him round with great soft wisps, and so let him stand an hour upon his bridle, and then feed him.

Of feeding the hunting Horse.

To speak first for the food for hunting horses, the most ordinary is good sweet sound Oats, either throughly dryed with age, or else on the Kiln, or in the Sun, and if your horse be either low of flesh, or not of perfect stomach, if to two parts of those Oats you add a third part of clean old Beans, it shall be very good and wholsome, and if your horse be in dyet for a match, and have lost his stomach if then you cause these Beans to be spelted upon a Miln, and so mixt with Oats; it will recover him. The next food, which is somewhat stronger and better, is bread thus made, take two bushels of good clean Beans and one bushel of Wheat, and grind them together; then through a fine Range, boult out the quantity of two pecks of pure meal, and bake it in two or three loaves by it self, and the rest sift through a meal sieve; and knead it with water and good store of barm, and so bake it in great loaves, and with the courser bread feed your horse in his rest, and with the finer against the dayes of sore labours. Now for the hours of his feeding it shall be in the morning, after his coming from water, an hour after high noon, after his comming from his evening water, and at nine or ten of the clock at night upon the dayes of his rest; but upon the dayes of his exercise, two hours after he is throughly cold inwardly and outwardly, and then after according as before mentioned. Lastly, for the proportion of food, *you shall keep no certain quantity, but according*

cording to the horses stomach, that is to say, *you shall feed him by a little at once, so long as he eats with a good appetite; but when he begins to trifle or fumble with his meat, then to give him no more.* Now for his Hay, you shall see that it be dry, short, uplandish hay; and so it be sweet, respect not how coarse or rough it is, sith it is more to scour his teeth, and cool his stomach, then for nourishment expected from it.

Touching the Horses exercise, *which is only in the following of the hounds*, you shall be sure to train him after those which are most swift and speedy; for so you shall know the truth, and not be deceived in your opinion. Touching the dayes, *it shall be twice a week at least, but most commonly thrice*; as for the quantity of his exercise, it must be according to his foulness or cleanness: for if he be very foul, *you must then exercise moderately to break his grease*: if half foul half clean, *then somewhat more to melt his grease*: and if altogether clean, then you may take what you please of him (provided, that you do nothing to discourage his spirits, to abate his mettle, or to lame his limbs) and after every dayes exercise, be assured either to give him the same night, or the next day following, something by way of scouring; or otherwise to take away the grease formerly melted, by means whereof you shall be ever sure to keep your horse in all good health and perfection. The exercise of the Horse.

The best and most excellentest way to scour or purge your horse from all grease, glut, or filthiness within his body, which is a secret hitherto was never either sufficiently taught, or perfectly learned, is to take of Annis seeds three ounces, of Cumminseeds six drams, of Carthamus a dram and a half, of Fenugreek-seed one ounce two drams, of Brimstone one ounce and a half, beat all these to a fine powder, and searse them; then take of Sallet-oyl a pint and two ounces, of honey a pound and a half, and of white Wine four pints, then with as much fine white meal as will suffice, make all into a strong stiffe paste, and knead and work it well: this paste keep in a clean cloath, for it will last long, and after your horse hath been hunted, and is at night, or in the morning exceeding thirsty, take a ball thereof as big as a mans fist, and wash and dissolve it in a gallon or two of cold water, and it will make the water look white like milk; then offer The scouring of the horse.

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it the horſe to drink in the dark, leſt the colour diſpleaſe him: if he drink it, then feed him; but if he refuſe to drink it, yet care not, but let him faſt without drink till he take it, which aſſuredly he will do in twice or thrice offering; and after once he hath taken it, be then aſſured he will forſake any other drink for it, of this drink, your horſe can never take too much nor too oft; if he have exerciſe: or otherwiſe it feeds too ſore. For all inward infirmities whatſoever it is a preſent remedy: therefore I would not wiſh any horſemen of vertue at any time to be without it; and being once made, it will laſt three or four moneths at leaſt.

Ordering of a Horſe after exerciſe.

After your Horſe hath been exerciſed with Hunting, running train-ſets, or otherwiſe: you ſhall ever cool him well in the field before you bring him home: but being come to the ſtable you ſhall neither waſh nor walk, but inſtantly houſe him, give him ſtore of freſh litter and rub him therewith, and with dry cloaths, till there be not a wet hair about him, then cloath him with his ordinary cloaths, and wiſp him round: then caſt another ſpare cloath over him, which you may abate at your pleaſure, and ſo let him ſtand till it be time to feed him. And thus you may keep any hunting horſe either for match or otherwiſe, in as good ſtate and ſtrength as any Horſeman in this Nation, though he exceed you far both in Reputation and Experience.

CHAP. VI.

Of the ordering and dieting of the Running Horſe.

IF any Husbandman have his mind taken up onely with the delight of Running Horſes; which is a noble ſport, and though not of ſo long indurance, yet equal with any before ſpoken of, he ſhall for the bettering of his knowledg give to his memory theſe few Rules following, by which he ſhall rightly order and diet him.

Of his taking up.

Firſt, for his taking up from graſs (for there for order ſake we muſt firſt begin) it ſhall be at the ſame time of the year, and after the ſame manner that you took up your hunting horſe, and till you have enſeamed him, hardned his fleſh, taken away his inward greaſe, and brought him to a good perfectneſs of wind, you ſhall cloath him, dreſs him, water him, feed him, exerciſe him,

him, purge him and order him after labour, in all points and in all things as you did your hunting horse.

When he is thus clean of body and wind, you shall then lay on some more cloaths, then you did on your hunting horse, to purge his body a litle the more, and to make him the more apt to sweat, and evacuate humors as they shall grow: the ordinary quantity whereof, would be a warm narrow woollen cloath about his body on either side his heart, then a fair white sheet, a wooll en cloath about it, and a canvase cloath or two above it, and before his breast a Woollen cloath at least two double: he would continually stand upon clean litter, and have his stable very dark, and perfumed with Juniper, when as the strength of his dung shall annoy it. Of cloathing him.

For his dressing it shall be in all points done as you did to your hunting horse, onely to dress him once a day is sufficient, and that ever in the afternoon: but for rubbing his limbs or body with dry cloaths or wisps, you shall do as often as you come into the Stable, provided that you turn but his cloaths up, but not take them from his body. Of dressing him.

You shall water your running horse as you watered your hunting horse, and give him the same exercise after it, only you shall not bring him into the stable of at least an hour and more after he is watered. Of watering him.

The best food for your running horse, is either good sweet Oats well dryed, sunned and beaten, or bread made of two parts wheat, and but one part beans, and boulted and sifted, and knodden, as was before shewed; onely if you adde to your better sort of bread the whites of twenty or thirty Eggs, and with the barm, a little Ale also, it will be much the better; for you shall not respect how little water you use at all: the hours you feed in, and the quantity of the food shall be the same, and in the same manner as was mentioned before, for the hunting horse, yet with these observations, that if your horse be very lean, sickly, and have a weakly stomach, that then you may as before shewed, give him with his Oats a few spelted beans, or else wash his Oats in strong Ale or Beer, or in the whites of a couple of eggs. Of feeding him.

Touching his exercise, it consisteth in two kinds, the one ayring, the other coursing: ayring is a moderate and gentle exercise by ayring. Of his exercise

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which you ſhall uſe morning and evening, by riding or leading your horſe a foot pace (but riding is better and leſs in danger of cold) in the morning after his water up to the Hills, and in the evening after his water by the River-ſide, by the ſpace of an hour or two together; and before you lead him forth to ayre, you ſhall be ſure to give him a rere Egg broken into his mouth as ſoon as his bridle is put on, for it will encreaſe wind: and this ayring you ſhall by no means forbear, but upon his dayes of purging or ſweating, or when it much raineth, for then to ayr is unwholſome. Again, if your horſe be very fat, you ſhall ayr before Sun riſe, and after Sun-ſet: but if he be lean, then you ſhall let him have all the ſtrength and comfort of the Sun you can deviſe; and during this ayring, you ſhall be ſure that your horſe be cloathed very warm, eſpecially before the breaſt, and on each ſide the heart, for cold to a running horſe is mortal.

Exerciſe by courſing.

You ſhall courſe your horſe according to his ſtrength and ability of body, that is to ſay, twice a week, thrice, or as oft as you ſee cauſe, and you ſhall courſe him ſometimes in his cloaths to to make him ſweat, and conſume his greaſe, and that muſt be done moderately and gently: and ſometime without his cloath, to increaſe wind; and that ſhall be done ſharply and ſwiftly: you ſhall by keeping your horſe faſting the night before, be ſure that his body be empty before he do courſe, to waſh his tongue and noſtrils with vinegar, or to piſs in his mouth ere you take his back, is very wholſome: you ſhall lead him in your hand well and warm cloathed to the courſe, and there uncloath him and rub his limbs well: then having courſt him, after a little breath taking, cloath him again and ſo ride him home, there rub him throughly, and let him ſtand till he be fully cold; which perceived, let his firſt meat you give him be a handful or two of the ears of Pollard Wheat: then after, his ordinary food as aforeſaid.

Of ſweats.

There is alſo another exerciſe for your running horſe, which is ſweats in his cloaths, either abroad or in the houſe, for Sweats in his cloaths abroad, they are thoſe which are taken upon the courſe, and are formerly ſpoke of, that they muſt be given by a moderate gallopping, no man running, and as ſoon as your horſe hath paſt over his courſe, and is in a high ſweat, you ſhall inſtantly

instantly have him home and there lay more cloaths upon him, and keep him stirring till he have sweat so in the Stable an hour or more, then abate his cloaths by little and little, till he be perfectly cooled and dryed; which you must further by rubbing him continually with dry cloaths, and by laying dry cloaths on, and taking the wet away: but for Sweats in his cloaths, without any exercise abroad, you shall give them either when the weather is so much unseasonable, that you cannot go forth, or when your horse is so much in danger of lameness, that you dare not strain him; and you shall do it thus: First take a blanket folded and warmed very hot and wrap it about his body, then over it lay two or three more, and wisp them round, then over them as many cover-lids, and pin them fast and close; then make the horse stir up and down the Stable till he begin to sweat, then lay on more cloaths, and as the sweat trickleth down his face, so rub it away with dry cloaths till he have sweat sufficiently; then (as before is shewed) abate the cloaths by little and little, and rub him in every part, till he be as dry as at first.

Of scouring him.

After every course or sweat, you shall scour or purge your horse in the same manner, and with the same medicine that you did your Hunting-horse; for it is the best that can by art be invented, being both a Purge and a Restorative, cleansing and comforting all the parts of a Horses body: but if you think it purgeth not enough, then you shall take twenty Raisins of the Sun, the stones pickt out, and ten Figs slit in the midst, boyl them in a pottle of fair running water, till it come to be thick, then mixe it with powder of Lycoras, Anniseeds and Sugar-candy, till it come to a stiff paste, then make pretty round balls thereof, and roul them up in butter, and give your horse three or four of them the next morning after his sweat or course, and ride him an hour after, and then set him up warm.

Ordering after exercise.

After your horse hath been courst or sweat, and is as before said cold and dry, you shall then unbridle him, give him some few Wheat ears, and then at an hour or two after, give him a very sweet mash, then some bread after, then at his due hour dresse him, and give him when you find him thirsty some cold water, with a ball of your leaven dissolved into it, and so let him stand till you feed him for all night.

General Rules for a Running Horse.

Course not your Horse sore for at least four or five dayes before you run your match, lest the soreness of his limbs abate him of his speed.

Except your horse be a very foul feeder muzzle him not above two or three nights before his match, and the night before his bloudy courses.

Give your horse as well his gentle courses, as his sharp courses upon the Race he must run, that he may as well find comfort as displeasure thereon.

In training your horse, observe not the number of the miles, but the labour fit for your horse.

Be sure upon the match day that your horse be empty, and that he take his rest untroubled, till you prepare to lead him forth.

Shooe your horse ever a day before you run him, that the pain of the hammers knocks may be out of his feet.

Saddle your horse on the Race day in the stable before you lead him forth, and fix both the pannel and the girths to his back and sides with shooe-makers wax, to prevent all dangers.

Lead your Horse to his course with all gentleness, and give him leave to smell to other horses dung, that thereby he may be inticed to stale and empty his body as he goes.

When you come to the place where you must start, first rub his Limbs well, then uncloath him, then take his back, and the word given, start him with all gentleness and quietness that may be, lest doing any thing rashly, you happen to choak him in his own wind.

And thus much for the ordering and dieting of the Running horse, and the particularities belonging to the same.

CHAP. VII.

The ordering of the Travelling Horse.

General Rules for a travelling horse.

NOw for our Husbandmans Travelling Horse, which is to carry him in his Journeys, and about his business in the Country, he shall first feed him with the best sweet hay, dry oats or dry beans and oats mixt together: in his travell he shall feed him according to his stomack, more or less, and in his rest at a certain

certain proportion; as half a peck at each watering, is utterly sufficient.

If you travel, feed your horse early, that he may take his rest soon.

In travel, by no means wash nor walk your horse, but be sure to rub him clean.

Water him a mile before you come to your Inne, or more, as shall lye in your Journey; or if you fail thereof, forbear it till next morning; for water hath often done hurt; want of water never did any.

Let your horse neither eat nor drink when he is extream hot, for both are unwholsome.

When the dayes are extream hot, labour your horse morning and evening, and forbear high-noon.

Take not your saddle off suddenly, but at leisure, and laying on the cloath, lay on the saddle again till he be cold.

Litter your Horse deep, and in the days of his rest, let it also lye under him.

Dress your horse twice a day when he rests, and once when he travells.

If the horse be stoned let him go to the soyl, and be purged with grass in *May*; a moneths time is long enough, and that grass which grows in Orchards under Trees is best.

Let him blood, Spring and Fall, for they are the best times to prevent sicknesses.

In your journying light at every steep hill, for it is a great refreshing and comfort to your horse.

Before you sleep, every Night in your journey see all your horses feet stopt with Oxe-dung, for it taketh away the heat of travel and surbating.

Many other necessary Rules there are, but so depending upon these already shewed, that who so keepeth them shall not be ignorant of any of the rest; for they differ more in name than nature.

CHAP. VIII.

How to cure all general inward ſickneſſes in horſes, which trouble the whole body; of Feavers of all ſorts, Plagues, Infections, and ſuch like.

SIckneſſes in general are of two kinds, one offending the whole body, the other a peculiar member: the firſt hidden and not viſible, the other apparent and known by his outward demonſtration. Of the firſt then, which offend the whole body, are Feavers of all ſorts as the Quotidian, the Tertian, the Quartan, the Continual, the Hittique, the Feavers in Autumn, in Summer, or in Winter, the Feaver by ſurfeit, Feaver Peſtilent, Feaver Accidental, or the general Plague, they are all known by theſe ſigns, much trembling, panting, and ſweating, a ſullen countenance that was wont to be cheerful, hot breath, faintneſs in labour, decay of ſtomach, and coſtiveneſs in the body; any, or all of which when you perceive, firſt let the horſe blood, and after

The Cure. give him this drink: Take of *Selandine* roots leaves and all a good handful, as much *Wormwood* and as much *Rew*, waſh them well, and then bruiſe them in a mortar, which done, boyl them in a quart of Ale well, then ſtrain them and adde to the liquor half a pound of ſweet Butter, then being but luke-warm give it the horſe to drink, or half an ounce of *Diapente*, in a pinte of Muſkadine.

CHAP. IX.

Of the Head-ach, Frenzie, or Staggers.

THe ſigns to know theſe diſeaſes, which indeed are all of one nature, and work all one effect of mortality, are hanging down of the head, watry eyes, rage and reeling. And the

The Cure. Cure is to let the horſe blood in the neck three mornings together, and every morning to take a great quantity, then after each morning blood-letting, to give the horſe this drink: Take a quart of Ale, and boyl it with a big white bread cruſt, then take it from the fire, and diſſolve three or four ſpoonfuls of honey in it, then luke-warm give it the horſe to drink, and cover his temples over with a plaiſter of Pitch; and keep his head exceeding warm, let his meat be little, and his Stable dark: but to give him the former quan-

quantity of *Diapente*, either in Muskadine or Honey water is the best Cure.

CHAP. X.

Of the Sleeping Evill.

THe Sleeping Evil or Lethargy in Horses proceeds from cold flegmy moist humors, which bind up the vital parts and makes them dull and heavy. The signs are continual sleeping or desire thereunto. The Cure is, to keep him much waking, and twice in one week to give him as much sweet Soap (in nature of a Pill) as a Ducks egg, and then after give him to drink a little new milk and honey, which is the onely cure at the first for this disease. But to be certain, I pray look in my Master-Piece, and there you shall find the infirmity more largely discoursed of, this being but a general cure of all Cattel, and not particularly handled of horses, as that is. The Cure.

CHAP. XI.

Of the Falling Evill, Planet-strook, Night-Mare, or Palsie.

THough these diseases have several faces, and look as though there were much difference between them, yet they are in nature all one, and proceed all from one offence, which is only cold flegmatick humors, ingendred about the Brain, and benumming the Senses, weakning the Members, sometimes causing a horse to fall down, and then it is called the Falling evil; sometimes weakning but one member only, then it is called Planet-strook, sometimes oppressing a horses stomach, and making him sweat in his sleep, and then it is called the Night-Mare; and sometimes spoyling an especial member by some strange contraction, and then it is called a Palsie. The Cure for any of these infirmities is to give the horse this purging Pill: Take of *Tar* three spoonfuls, of sweet Butter the like quantity, beat them well together with the powder of *Lycoras*, *Anniseeds*, and *Sugar-Candy*, till it be like paste, then make it into three round balls, and put into each ball two or three cloves of Garlick, and so give them unto the horse; observing to warm him both before and after, and keep him fasting two or three hours likewise, both before and after. The Cure.

CHAP.

CHAP. XII.

Of the general Cramp, or Convulsion of Sinews.

CRamps are taken to be the contraction or drawing together of the sinews of any one member; but Convulsions are when the whole body, from the setting on of the head to the extreamest parts are generally contracted and stiffned. The Cure of either is, first to chase and rub the member contracted with Vinegar and common Oyl, and then to wrap it all over with wet Hay, or rotten Litter, or else with wet Woollen cloaths, either of which is a present remedy.

The Cure.

CHAP. XIII.

Of any Cough or Cold whatsoever, wet or dry, for any Consumption or putrifaction of the Lungs whatsoever.

A Cold is got by unnatural heats, and too suddain coolings, and these Colds ingender Coughs, and those Coughs, putrifaction or rottenness of the Lungs. The Cure therefore for them all in general, is to take a handful or two of the white and greenish Moss which grows upon an Oak-pole, or any old Oak-wood, and boyl it in a quart of milk till it be thick, and being cold turned to a Jelly, then strain it, and give it the Horse luke-warm every morning till his Cough end; or else take three quarters of an ounce of the Conserve of *Elicampane*, and dissolve it in a pint of Sack, and luke-warm give it the horse fasting; then ride him after it, and set him up warm, feed as at ordinary times; thus do three mornings together.

The Cure.

CHAP. XIV.

Of the running Glaunders, or the mourning of the Chine.

TAke of *Auripigmentum* two drams, of *Tussilaginis* made into powder as much, then mixing them together with Turpentine till they be like paste, and making thereof little cakes, dry them before the fire; then take a chafing-dish and coals, and laying one or two of the cakes thereon, cover them with a tunnel, and then the smoak rising, put the tunnel into the horses nostrils, and

and let the ſmoak go up into his head: which done, ride the horſe till he ſweat: do thus once every morning before he be watered, till the running at his noſtrils ceaſe, and the kernels under his chaps wear away.

CHAP. XV.

Of hide-bound, or conſumption of the fleſh.

Hide-bound or conſumption of the fleſh, proceeds from unreaſonable travel, diſorderly diet, and many ſurfeits. It is known by a general diſlike and leanneſs over the whole body, and by the ſticking of the skin cloſe to the body, in ſuch ſort that it will not riſe from the body. The Cure is, firſt to let the horſe bloud, and then give him to drink three or four mornings together a quart of new milk, with two ſpoonfuls of honey, and one ounce of *London* Treacle: then let his food be either ſodden Barly, warm Grains and Salt, or Beans ſpelted in a Mill, his drink Maſhes. The Cure.

CHAP. XVI.

Of the Breaſt pain, or any other ſickneſs proceeding from the heart, as the Anticor, *and ſuch like.*

Theſe Diſeaſes proceed from too rank feeding, and much fatneſs; the ſigns are a faultring in his fore-legs, a diſableneſs to bow down his neck, and a trembling over all his body. The Cure is, to let him blood, and give him three mornings together two ſpoonfuls of *Diapente* in a quart of Ale or Beer, for it alone putteth away all infection from the heart. The Cure.

CHAP. XVII.

Of tyred Horſes.

If your Horſe be tyred either in Journying or any Hunting match, your beſt help for him is to give him warm Urine to drink, and letting him blood in the mouth to ſuffer him to lick up and ſwallow the ſame: Then if you can come where any nettles are, to rub his mouth and ſheath well therewith: then gently to ride him untill you come to your reſting place, where ſet him up very warm, and before you go to bed give him ſixe ſpoonfuls of *Aqua vitæ* to drink, and as much provender as he will

will eat. The next morning rub his legs with sheeps-foot oyl, and it will bring fresh nimbleness unto his sinews.

CHAP. XVIII.

Of diseases in the Stomach, as Surfeits, loathing of Meat or Drink, or such like.

IF your horse with the glut of provender, or eating raw food, have given such offence to his stomach that he casteth up all he eateth or drinketh, you shall first give him a comfortable drench, as *Diapente*, or *Treaphamicon* in Ale or Beer; and then keeping him fasting, let him have no food but what he eateth out of your hand, which would be bread well bak't and old, and after every two or three bits a lock of sweet Hay: and his drink would be onely new milk till his stomach have gotten strength, and in a bag you shall commonly hang at his nose sowre brown bread steep'd in Vinegar, at which he must ever smell, and his stomach will quickly come again to his first strength.

CHAP. XIX.

Of Foundring in the Body.

FOundring in the body is of Surfeits the mortallest and soonest gotten: it proceedeth from intemperate riding a horse when he is fat, and then suddainly suffering him to take cold; then washing a fat horse, there is nothing sooner bringeth this Infirmity. The signs are sadness of countenance, staring hair, stiffness of limbs, and loss of belly: And the Cure is only to give him wholsome strong meat, as bread of clean beans, and warm drink, and for two or three mornings together a quart of Ale brewed with Pepper and Cinnamon, and an ounce of *London Treacle*.

The Cure.

CHAP. XX.

Of the Hungry Evill.

THe hungry Evil is an unnatural and over-hasty greedines in a horse to devour his meat faster than he can chew it, and is only known by his greedy snatching at his meat, as if he would devour it whole. The Cure is, to give him to drink milk and Wheat meal mixt together by a quart at a time, and to feed him with provender by a little and a little till he forsake it.

The Cure.

CHAP.

CHAP. XXI.

Of the diseases of the Liver, as Inflammations, Obstructions, and Consumptions.

THe Liver, which is the vessel of blood, is subject to many diseases, according to the distemperature of the blood, and the signs to know it, is a stinking breath, and a mutual looking towards his body. And the Cure is to take *Aristolochia longa*, and boyl it in running water, till the half part be consumed, and let the horse drink continually thereof, and it will cure all evils about the Liver, or any inward conduits of blood. The Cure.

CHAP. XXII.

Of the diseases of the Gall, and especially of the Yellows.

FRom the over-flowing of the Gall, or rather want of the Gall, which is the vessel of Choler, spring many mortal diseases, especially the Yellows, which is an extream faint mortal sickness, if it be not prevented betime: the signes are yellowness of the eyes and skin, and chiefly underneath his upper lippe next unto his foreteeth, a sudden and faint falling down by the high way, or in the stable, and universal sweat over all the body. The cure is, first to let the horse blood in the neck, in the mouth and under the eyes, then take two-penny-worth of *Saffron*, which being dryed and made into fine powder, mix it with sweet butter, and in manner of a Pill give it in balls to the horse three mornings together; let his drink be warm, and his hay sprinkled with water: A quart of a strong decoction of *Selladine* helps it also. The Cure.

CHAP. XXIII.

Of the sickness of the Spleen.

THe Spleen which is the vessel of Melancholy; when it is over-charged therewith grows painful, hard and great, in such sort, that sometimes it is visible. The signs to know it, is much groaning, hasty feeding, and a continual looking to his left side only. The Cure is *Egrimony*; and boyl a good quantity of it in the water, which the horse shall drink; and chopping the The Cure.

leaves small; mix them very well with sweet *May-Butter*, and give the horse two or three good round balls thereof, in the manner of Pills.

CHAP. XXIV.

Of the Dropsie or Evil habit of the body.

THe Dropsie is that evil habit of the body, which engendred by surfeits and unreasonable labour, altereth the colours and complexions of horses, and changeth the hairs in such an unnatural sort, that a man shall not know the beast, with which he hath been most familiar. The Cure. The Cure is, to take a handful or two of *Wormwood*, and boyling it in Ale or Beer, a quart or better, give it the horse to drink luke-warm, morning and evening, and let him only drink his water at noon time of the day.

CHAP. XXV.

Of the Chollick, Belly-ake, and Belly bound.

THe Chollick or Belly-ake is a fretting, gnawing or swelling of the Belly, or great bag, proceeding from windy humors, or from eating of green corn, or pulse, hot grains without salt or labour, or bread dow bak't; And Belly-bound, is when a horse cannot dung. The Cure. The Cure of the Cholick or Belly-ake is, to take good store of the hearb *Dill*, and boyl it in the water you give your horse to drink: but if he cannot dung, then you shall boyl in his water good store of the hearb called *Fenugreek*, and it will make him loose without danger or hurting.

CHAP. XXVI.

Of the Laxe or Bloody-Flux.

THe Laxe or Bloody-flux, is an unnatural Loosness in a horses body, which not being stayed, will for want of other excrement, make a horse void blood only. The Cure. The Cure is, take a handful of the hearb *Shepheards Purse*, and boyl it in a quart of strong Ale, and when it is luke-warm, take the seeds of the hearb *Woodrose* stampt, and put it therein, and give it the horse to drink.

CHAP.

CHAP. XXVII.

Of the falling of the Fundament.

THis cometh through mislike and weakness, and the Cure is, Take *Town-Cresses*, and having dryed them to powder, with your hand put up the Fundament, and then strew the powder thereon; after it, lay a little honey thereon, and then strew more of the powder, mixt with the powder of *Cummin*, and it helpeth. The Cure.

CHAP. XXVIII.

Of Bots and Worms of all sorts.

THe Bots and gnawing of Worms, is a grievous pain, and the signs to know them, is the horses oft beating his belly and tumbling and wallowing on the ground, with much desire to lye on his back. The Cure is, take the leaves chopt of the hearb *Saven*, and mix it with Honey and Butter, and make two or three balls thereof, make the horse swallow them down, and it will help him. The Cure.

CHAP. XXIX.

Of the pain in the Kidneys, pain-piss, or the Stone.

ALl these diseases spring from one ground, which is only gravel and hard matter gathered together in the Kidneys, and so stopping the conduits of Urine: The signs are only that the horse will often strain to piss, but cannot. The cure is to take a handful of *Maiden-hair*, and steep it all night in a quart of strong Ale, and give it the horse to drink every morning till he be well: this will breake any stone whatsoever in a horse. The Cure.

CHAP. XXX.

Of the Strangullion.

THis is a soreness in the horses yard, and a hot, burning smarting when he pisseth: the signes are, he will pisse off, yet but a drop or two at once. The cure is, to boyl in the water which he drinketh, good store of the hearb *Mayth*, or *Hogges-fennel*, and it will cure him. The Cure.

CHAP. XXXI.

Of Pissing Blood.

The Cure. THis commeth with over-travelling a horse, or travelling a Horse sore in the winter when he goeth to grasse. The Cure is, take *Aristolochia longa*, a handfull and boyl it in a quart of Ale, and give it the horse to drink luke-warm, and give him also rest.

CHAP. XXXII.

Of the Colt-evill, mattering of the yard, falling of the yard, shedding the seed.

The Cure. ALL these evills proceed from much lust in a horse; and the cure is, the powder of the hearb *Avis*, and the leaves of *Betony*; stamp them with white wine, to a moyst salve, and annoynt the sore therewith, and it will heal all imperfection in the yard: but if the horse shed his seed, then beat Venice Turpentine and Sugar together, and give him every morning a good round ball thereof, untill the flux stay.

CHAP. XXXIII.

Of the particular diseases in Mares, barrenesse, consumption, rage of love, casting Foals, hardness to foal, and how to make a Mare cast her Foal.

IF you'l have your Mare barren, let good store of the hearb *Agnus Castus* be boyled in the water she drinketh: if you would have her fruitful, then boyl good store of *Mother-wort* in the water which she drinketh: If she loose her belly, which sheweth a consumption of the womb, you shall then give her a quart of Brine to drink, *Mugwort* being boyled therein. If your Mare through pride of keeping grow into extream lust, so that she will neglect her food, through the violence of her fleshy appetite, as it is often seen amongst them, you shall house her for two or three dayes, and give her every morning a ball of Butter and *Agnus Castus* chopt together; if you would have a Mare to cast a Foal, take a handfull of *Dittany*; and boyl it in a quart of Ale, and it will deliver her presently. If she cannot Foale, take the hearb *Horsemint*, and either dry it or stamp it, and take the pow-

der

der or the juyce, and mixe it with strong ale; and give it the Mare and it will help her: If your Mare from former bruisings or strokes be apt to cast her Foals, as many are, you shall keep her at grasse very warme, and once in a week, give her a good warm mash of drink: this secretly knitteth beyond expectation.

CHAP. XXXIV.

Of drinking venome, as Horse-leaches, Hens dung, or such like.

IF your Horse have drunk Horse-leaches, hens dung, feathers, or such like venemous thing, which you shall know by his panting, swelling, or scouring, you shall take the hearb *Sow-thistle*, and drying it, beat it into powder, and put three spoonfuls thereof into a quart of ale, and give it the horse to drink.

CHAP. XXXV.

Of Suppositories, Clysters, and Purgations.

IF your horse by sickneſſe, strict dyet, or too vehement travel grow dry and costive in his body, as it is ordinary, the easiest means in extremity to help him, is to give him a supository: the best of which is, to take a candle of four in the pound, and cut off five inches at the bigger end, and thrusting it up a good way with your hand into his fundament, presently clap down his tayle, and hold it hard to his tuell, a quarter of an hour, or half an hour: and then give him leave to dung; but if this be not strong enough, then you shall give him a Clyster, and that is, take four handfuls of the hearb *Anise*, and boyl it in a pottle of running water, till half be consumed, then take the decoction, and mixe it with a pint of Sallet-oyl, and a pretty quantity of salt, and with a Clister-pipe give it, at his tuel. But if this be too weak, then give him a purgation thus: Take twenty Raisins of the Sun without stones, and ten Figs slit, boyl them in a pottle of runing water till it come to a jelly; then mixe it with the powder of Lycoris, Anniseeds, and Sugar-candy, till it be like paste; then make it into round balls, and roule it in sweet butter, and so give it the horse, to the quantity of three hen egs. The Cure.

CHAP.

CHAP. XXXVI.

Of Neesings and Frictions.

THere be other two excellent helps for sick horses, as Frictions and Neesings: the first to comfort the outward parts of the body, when the vitall powers are astonished: the other to purge the head when it is stopt with phlegme, cold or other thick humors. And of Frictions, the best is vinegar and Patch-grease melted together, and very hot chafed into the horses body against the hair. And to make a horse neese, there is nothing better, than to take a bunch of Pellitory of Spain, and binding it unto a stick, thrust it up a horses nostrils, and it will make him neese without hurt or violence.

CHAP. XXXVII

Of diseases in the eyes: as watry-eyes, blood-shotten, eyes dim eyes, moon eyes, stroke in the eye, wart in the eye, inflammation in the eye, Pearle, Pin, web, or Haw.

UNto the eye belongeth many diseases, all which have their true signs in their names, and as touching that which is watry, blood-shotten, dim, moon, stricken or inflamed, they have all one cure. The cure is, take Wormwood, and beat it in a Mortar with the gall of a Bull, strain it, and anoynt the horses eyes therewith, and it is an approved remedy. But for the Wart, Pearl, or Pin or Web, which are evills grown in, and upon the eye to take them off, take the juyce of the heath Beth, and wash his eyes therewith, and it will weat the spots away. For the Haw every Smith can cut it out.

The Cure.

CHAP. XXXVIII.

Of the Impost hume in the ear, Pole-evill, Fistula, swelling after blood-letting, any gald back, canker in the Withers, sitfast, Wens, Navel-gall, or any hollow ulcer.

THese diseases are so apparent and common, that they need no further description but their names, and the most certain cure is to take clay or mud or lome wall, without lime, the straws and all, and boyling it in strong vinegar, apply it plaister wise

The Cure.

wise to the sore, and it will of its own nature search to the botome and heale it; provided, that if you see any dead or proud flesh arise, that then you either eat or cut it away.

CHAP. XXXIX.

Of the Vives.

FOr the *Vives*, which is an inflammation of the kernels between the chap and the neck of the horse; take Pepper one penny-worth, of *Swines grease* one spoonful, the juyce of a handful of Rew, Vinegar two spoonfulls, mixe them together and then put it equally into both the horses eares, and then tye them up with two flat laces, then shake the eares, that the medicine may go down, which done, let the horse blood in the neck, and in the temple veins, and it is a certain cure.

CHAP. XL.

Of the strangle, or any boyl, botch or other Impostume whatsoever.

ALL these diseases, are of one nature, being onely hard Byles or impostumes gathered together by evil humours, either between the chaps, or else where on the body. The cure is, take *Southernwood*, and dry it to powder, and with Barley meal and the yelk of an Egg make it into a salve, and lay it to the Impostume, and it will ripen it, break it, and heal it. The Cure.

CHAP. XLI.

Of the Canker in the Nose, or any other part of the body.

TO heal any Canker in what part soever it be: Take the juice of *Plantane*, as much *Vinegar*, and the same weight of the powder of *Allom*; and with it anoint the sore twice or thrice a day, and it will kill it and cure it.

CHAP. XLII.

Of stanching of blood, whether it be at the Nose, or proceed from any wound.

IF your Horse bleed violently at the nose, & it will not be staid, then you shall take *Betony*, and stamp it in a Mortar with Bay-salt, or other white Salt, and stop it into the horses nose, or apply

ply it to the wound, and it will ſtanch it, but if you be ſuddenly taken; as riding by the high-way or otherwiſe, and cannot get this herb, you ſhall take any Woollen cloath, or any felt hat, and with a Knife ſcrape a fine Lint from it, and apply it to the bleeding place. and it will ſtanch it preſently.

CHAP. XLIII.

Of the diſeaſes in the mouth, as bloody Rifts, Ligs, Lampas, Camery, Inflammation, Tongue-hurt, or the Barbs.

IF you find any infirmity in your horſes mouth, as the bloody rifts, which are chaps or rifts in the palate of the horſes mouth; the ligs, which are little puſtules or bladders within the horſes lips: the Lampaſs, which is an excreſſion of fleſh above the teeth; the Camery, which is little Warts in the roof of the mouth: Inflammations, which are bliſters: Barbs, which are two little paps under the tongue, or any hurt on the tongue by bit or otherwiſe, you ſhall take the leaves of Wormwood, and the leaves of *Shirwit*, and beat them in a Mortar with a little Honey, and with it anoint the ſores, and it will heal them; As for the Lampaſs, they muſt be burnt away, which the ignorant eſt Smith can eaſily do.

The Cure.

CHAP. XLIV.

Of pain in the Teeth, or looſe Teeth.

FOr any pain in the Teeth, take Betony and ſeeth it in Ale or Vinegar till a half part be conſumed, and waſh all the gums therewith: but if they be looſe, then only rub them with the leaves of *Elicampane* or *Horſe-chelm* after they have been let blood, & it will faſten them.

CHAP. XLV.

Of the Crick in the Neck.

FOr the Crick in the Neck, you ſhall firſt chafe it with the Friction before ſpecified, and then anoint and bath it with Sope and Vinegar boyled together.

CHAP.

CHAP. XLVI.

Of the falling in the Creſt, mangineſs of the Main, or ſhedding of the hair.

ALl theſe diſeaſes proceed from poverty, miſlike, or over-riding; and the beſt cure of the falling of the Creſt, is bloud-letting, and proud keeping, with ſtore of meat; for ſtrength and fatneſs ever will raiſe up the Creſt; but if the main be mangy, you ſhall anoint it with butter, and Brimſtone, and if the hair fall away, then take Southernwood and burn it to aſhes, then take thoſe aſhes, and mixing them with common oyl, anoint the place therewith, and it will bring hair preſently, ſmooth, thick, and fair.

CHAP. XLVII.

Of pain in the Withers.

A Horſes Withers are ſubject to many griefs and ſwellings which proceed from cold humors, ſometimes from evill ſaddles, therefore if at any time you ſee any ſwelling about them, you ſhall take the herb Hearts-tongue and boyl it with the oyl of Roſes, and very hot apply it to the ſore, and it will aſſwage it, or elſe break it and heal it.

CHAP. XLVIII.

Of ſwaying the Back or weakneſs in the Back.

THeſe two infirmities are dangerous, and may be eaſed, but never abſolutely cured: therefore where you find them, take Colewort and boyl them in oyl, and mixing them with a little Bean meal charge the Back, and it will ſtrengthen it.

CHAP. XLIX.

Of Itch in the tayl, or of the general Scab and Mangineſſe, or of the Farcy.

FOr any of theſe diſeaſes, take freſh greaſe, & yellow Arſnick, mixe them together, and where the Mangineſs or Itch is, there rub it hard in, the ſore being made raw: But if it be for Farcy, then with a Knife ſlit all the Knots, both hard and ſoft, and then rub in the Medicine: which done, tye up the horſe, ſo as he

may not come to bite himself, and then after he hath stood two or three hours, take old piss and salt boyl'd together, provided alwayes that you first let him blood, and take good store from him, and also give him every morning a strong scouring, or a strong purge, both which are shewed before.

CHAP. L.

Of any halting which cometh by strain, or stroak either before or behind from the shoulders or hips down to the hoof.

THere be many infirmities which make a horse halt, as pinching the shoulder, wrench in the shoulder, wrench in the nether joynt, splatting the shoulder, shoulder pight, strains in the joynts, and such like, all which since they happen by one accident, as namely, by the violence of some slip or strain, they may be cured by one Medicine, and it is thus: After you have found where the grief is, as you may do by griping and pinching every several member, then where he most complaineth, there is his most grief. You shall take (if the strain be new) Vinegar, Bole-armenick, the whites of Eggs and Bean-flowr, and having beaten them to a perfect salve, lay them very hot to the sore place, and it will cure it; but if the strain be old, then take Vinegar and Butter, and melting them together with Wheat bran, make it into a pultis, and lay it to the sore as hot as may be, and it will without doubt take away the grief.

CHAP. LI.

Of Foundring in the Feet.

OF foundring there be two sorts, a dry and a wet: the dry foundring is incurable; the wet is thus to be helpt: First, pare all the soals of his feet so thin, that you may see the quick, then let him blood at every toe, and let them bleed well, then stop the vein with Tallow and Rosen, and having tackt hollow shooes on his feet, stop them with Bran, Tarre and Tallow, as boyling hot as may be, and renew it once in two days, for a week together, then exercise him much, and his feet will come to their true use and nimbleness.

CHAP.

CHAP. LII.

Of the Splent, Curb, Bone-spaven, or any knobby or bony excression or Ring-bone.

A Splent is a bony excression under the Knee or the fore-legg, the Curb is the like behind the hinder hough, the Spaven is the like on the inside of the hinder hough, and the Ring-bone is the like on the cronet of the hoof. And the cure is, first upon the top of the excression, make a slit with your Knife the length of a Barly-corn, or a little more, and then with a fine cornet raise the skin from the bone, and having made it hollow, the compasse of the excression, and no more; take a little lint, and dip it into the Oyl of *Origanum*, and thrust it into the hole and cover the knob, and so let it abide till you see it rot, and that nature casteth out both the medicine and the core. As for the Ring-bone you shall need to scarrifie and anoint it with the oyl only. The Cure.

CHAP. LIII.

Of the Malander, Selander, Pain-scratches, Mellet, Mules, Crown-scabs, and such like.

FOr any of these Sorances, you shall take Verdigrease and soft grease, and grinding them together to an Oyntment, put it in a Box by it self; then take Wax, hogs-grease, and Turpentine, of each alike, and being melted together, put that salve into another Box: then when you come to dress the sore; after you have taken off the scab and made it raw, you shall anoint it with your green salve of *Verdigrease* and fresh grease only for two or three dayes; it is a sharp salve, and will kill the cankerous humor: then when you see the sore look fair, you shall take two parts of the yellow salve, and one part of the green salve, and mixing them together, anoint the sore therewith till it be whole, making it stronger or weaker as you shall find occasion.

CHAP. LIV.

Of an upper Attaint, or nether Attaint, or any hurt by over-reaching.

THese attaints or strokes or cuts by over-reaching either on the back sinew of the fore-legg, on the heels or nether joynts

and may be safely healed by the same former medicine and means which healeth the Malander or Selander, in the former Chapter: only for your over-reaches, you shall before you apply your salve lay the sore plain and open, without hollowness, and wash it with beer and salt, or vinegar and salt.

CHAP. LV.

Of the infirmities of hoofs, as false quarters, loose hoofs, casting hoofs, hoof bound, hoof running, hoof brittle, hoof hurt, hoof soft, hoof hard, or generally to preserve hoofs.

THe hoof is subject to many miseries: as first to false quarters, which cometh by pricking, and must be helpt by good shooing, where the shooe must bear on every part of the foot, but upon the false quarters only. If the hoof be loose, anoint it with pitch of *Burgundy*, and it will knit it: if it be clean cast off, then pitch of *Burgundy* and tallow molten together, will bring a new; if it be bound or strained, it must be very well opened at the heels, the soal kept moist, and the cronet anointed with the fat of Bacon and Tar. If the frush of the feet run with stinking matter, it must be stopt with Soot, Turpentine, and Bole-armenick mixt together: if it be brittle or broken, then anoint it with Pitch and Linseed Oyl, molten to a soft salve; if it be soft then stop it with Sope, and the ashes of a burnt Felt mixt together; if the hoofs be hard, lay hot burning Cinders upon them, and then stop them with Tow and Tallow: and generally for the preserving of all good hoofs, anoint them daily with the sward or rind of fat Bacon.

CHAP. LVI.

Of the blood-spaven, or hough-bony, or any other unnatural swelling, from what cause soever it proceedeth.

THese two sorances, or pustules, or soft round swellings, the first on the inside of the hinder hough, and the other on the very huckle on the hough behind, they are soft and very sore; And the Cure is, first to take up the vein above, and let it bleed only from below, then having knit it fast with two shoo-makers ends

The Cure.

on

on both sides the slit, cut the vein in two pieces: then take Linseed and bruise it in a Morter, then mixe it with Cow-dung and heat it in a frying-pan, and so apply it to the swelling only, and if it break and run, then heal it with a plaister of pitch, and the horse shall never be troubled with Spaven more: but if the swelling come by strain or bruise, then take patch-grease, and melting it, anoint the sore therewith, holding a hot Iron near it to sink in the grease, then fold a linnen cloath about it, and it will assuage all swellings whatsoever.

CHAP. LVII.

Of Wind-galls.

THese are little blebs, or soft swellings on each side the Fetlock, procured by much travell on hard and stony wayes. The Cure is to prick them and to let out the Jelly, and then dry up the sore with a plaister of pitch. The Cure.

CHAP. LVIII.

Of Enterfairing or Shackle-gall, or any gallings.

ENterfairing is hewing one legge on another, and striking off the skinne, it proceedeth from weaknesse or straitnesse of the horses pace; and Shackle-gall is any gall underneath the Fetlock. The cure is, to anoint them with Turpentine and Verdigrease mixt together, or Turpentine alone, if it rankle not too much. The Cure.

CHAP. LIX.

Hurts on the Cronet, as the Quitter-bone, or Matlong.

THe Quitter-bone is a hollow Ulcer on the top of the cronet, and so is the Matlong, and the Cure is; First, to taint it with Verdigrease untill you have eaten out the core, and made the wound very clean; then you shall heal it up with the same salves that you heal the Scratches. The Cure.

CHAP.

CHAP. LX.

Of Wounds in the foot, as gravelling, pricking, figgs, retait or cloying.

IF your horse have any wound in his foot, by what mischance soever, you shall first search it, and see that it be clear of any nayl, point, or other splint to annoy it, then wash it very well with white Wine and Salt, and after taint it with the Oyntment called *Agyptiacum*, and then lay hot upon the taint with *Flax-hurds*, *Turpentine*, *Oyl* and *Wax* mingled together, and anoint all the top of the hoof and cronet with *Bole-armenick* and *Vinegar*: do this once a day untill the sore be whole.

CHAP. LXI.

To draw out a Stub, or Thorn.

TAke the herb Dittany, and bruise it in a Mortar with *Black Soap*, and lay it to the sore, and it will draw out the splent, iron, thorn, or stub.

CHAP. LXII.

Of the Aubury, or Tetter.

THe *Aubury* is a bloody Wart on any part of the horses body and the Tetter is a Cancerous Ulcer like it: The cure of both is with a hot iron to sear the one plain to the body, and to scarrifie the other: then take the juyce of *Plantane*, and mixe it with *Vinegar*, *Honey*, *and the powder of Allom*, and with it anoint the sore till it be whole.

The Cure.

CHAP. LXIII.

Of the Cords or Stringhalt.

THis is an unnatural bending of the sinews, which imperfection, a horse bringeth into the world with him; and therefore it is certain it is incurable, and not painful, but only an eye-sore, yet the best way to keep it from worse inconvenience, is to bathe his limbs in the decoction of *Colewotts*.

CHAP.

CHAP. LXIV.

Of Spur-galling, or fretting the skin, and hair.

FOr this there is nothing better than piss and salt, with which wash the sore daily.

CHAP. LXV.

Of healing any old Sore or Wound.

FResh Butter, and the heard *Ameos*, chopt and beaten together to a salve will heal any wound or any old sore.

CHAP. LXVI.

Of Sinewes being cut.

IF the horses sinews be cut, take the leaves of wild *Nep* or *Woodbine*, and beating them in a mortar with *May butter*, apply it to the sore, and it will knit the sinews.

CHAP. LXVII.

Of eating away any dead flesh.

TAke *Stubwort*, and lap it in a red dock leaf, and roast it in the hot Cinders, and lay it to the sore, and it will eat away any dead flesh. So will Verdigrease, burnt Allom, or Lime. The Cure.

CHAP. LXVIII.

Of Knots in the Joynts.

PAtch-grease applyed as is before shewed for swellings, will take away any hard Knots in the flesh, or upon the sinews.

CHAP. LXIX.

Of venemous Wounds, as biting with a mad Dog, tusks of Boars, Serpents, or such like.

FOr any of these mortal or venemous Wounds, take *Yarrow*, *Calamint*, and the grains of Wheat, and beat them in a mortar with water of *Southernwood*, and make it into a salve, and lay it to the sore, and it will heal it safely.

CHAP. LXX.

Of Lice or Nits.

THis filthiness of Vermine is bred in a horse through unnatural dislike and poverty: The Cure is, take the juyce of *Beets* and *Staves acre* beaten together, and with it anoint the Horses Body over, and it will make him clean. The Cure.

CHAP.

CHAP. LXXI.

Of defending a Horse from Flyes.

TAke the juyce of Pellitory of *Spain*, and mixing it with milk, anoint the Horses Belly therewith, and no Flies will trouble him.

CHAP. LXXII.

Of broken Bones, or Bones out of joynt.

AFter you have placed the Bones in their true places, take the *Ferosmund*, and beat it in a morter with the Oyl of Swallows, and anoint all the members; then splent it, and roul it up, and in fifteen dayes the Bones will knit and be strong.

CHAP. LXXIII.

Of drying up sores when they be almost whole.

ALlom burnt, unslak'd Lime, the ashes of an old shooe-sole burnt, or Oyster-shels burnt; any of these simply by themselves, will dry up any sore, though never so moyst.

CHAP. LXXIV.

A most famous Receit to make a Horse that is lean, and full of inward sickness, sound and fat in fourteen dayes, having been often approved of.

TAke of Wheat meal six pound, Anniseeds two ounces, Cummin seeds six drams, Carthamus one dram and a half, Fenugreek seeds one ounce and two drams, Brimstone one ounce and a half, Sallet oyl one pint, Honey one pound and a half, White Wine four pints; this must be made into paste, the hard simples being pounded into pouder, and finely searst, and then kneaded together, and so made into balls as big as a mans fist, then every watering consume one of those balls into his cold water which he drinketh for morning and evening for fifteen dayes together; and if at the first he be dainty to drink the water, yet care not, but let him fast till he drink it, and after he begins to take it, he will drink it with great greedinesse.

CHAP.

CHAP. LXXV.

How to make a white Star.

SLit the Horſes Fore-head the length of your Star, and then raiſe the Skin up with a cronet, and put in a plate of Lead as big as the Star, and let it remain ſo two or three days together: and then let it out and preſs down the Skin with your hand, that Hair will fall away, and white will come in the place: or to ſcald his Face or Skin with a ſower Apple roaſted, will bring white Hair: But to make a black Star, or a red Star in a Horſes Fore-head, I refer it for you to look and approve of my *Maſter-peice*, which belongeth only to that, for to be exactly diſcourſed of, that being only a general cure of all Cattell.

The end of the Horſe.

The general Cure and Ordering of the Bull, Cow, Calfe or Oxe.

CHAP. I.

Of the Bull, Cow, Calfe or Oxe, their ſhape and breed, uſe, choice, and preſervation.

FOr as much, as the Male of all Creatures are the principal in the breed and generation of things, and that the Fruit which iſſueth from their Seed participateth moſt with their outward ſhapes, and inward qualities, I think fitteſt in this place, where I intend to treat of Horned Cattel and Neat, to ſpeak firſt of the choice of a fair Bull, being the breeders principalleſt inſtrument of profit. You ſhall underſtand then, that of our Engliſh Cattel, (for I will not ſpeak of thoſe in *Italy*, and other Forrain Countries, as other Authors do, and forget mine own) the beſt are bred in *York-ſhire*, *Darby-ſhire*, *Lancaſhere*, *Stafford-ſhire*, *Lincoln-ſhire* *Gloceſter-ſhire*, and *Somerſet-ſhire*; The Countrys for breed.

ſhire, thoſe that were bred in *York-ſhire*, *Darby-ſhire*, *Lanca-ſhire* and *Stafford-ſhire*, are generally all black of colour, and they whoſe blackneſs is pureſt, and their Hairs like velvet, are eſteemed beſt; they have exceeding large horns, and very white with black tips; they are of ſtately ſhape, big, round, and well huckled together in every member, ſhort joynted and moſt comely to the eye, ſo that they are eſteemed excellent in the Market: thoſe in *Lincoln-ſhire* are for the moſt part Pide, with more white then the other colours, their horns little and crooked, of bodies exceeding tall, long and large, lean and thin thighed, ſtrong hoved, not apt to ſurbait, and are indeed fitteſt to labour and draught, Thoſe in *Somerſet-ſhire* and *Gloceſter-ſhire*, are generally of a blood red colour, in all ſhapes like unto thoſe in *Lincoln-ſhire*, and fitteſt for their uſes. Now to mix a race of theſe and the black ones together is not good, for their ſhapes and colours are ſo contrary, that their iſſues are very uncomely: therefore I would wiſh all men to make their breeds, either ſimply from one and the ſame kind, or elſe to mix *York-ſhire* with *Staf-ford-ſhire*, with *Lanca-ſhire* or *Darby-ſhire*, with one of the black races, and ſo likewiſe *Lincoln-ſhire*, with *Somerſet-ſhire*, or *Somerſet-ſhire*, with *Gloceſter-ſhire*.

Of not mixing and making of races.

The ſhape of the Bull

Now for the ſhapes of your Bull: he would be of a ſharp and quick countenance, his horns the larger the better, his neck fleſhy, his belly long and large, his fore-head broad and curled, his eyes black and large, his ears rough within, and hair like Velvet, his Muzzel large and broad at the upper Lip, but narrow and ſmall at the neather, his Noſtrils crooked within, yet wide and open, his dew-lap extending from his neather Lip down to his fore-booths, large ſide, thin and hairy, his breſt rough and big, his Shoulders large, broad and deep; his ribs broad and wide, his back ſtraight and flat, even to the ſetting on of his tayle, which would ſtand high, his huckle bones round and fair appearing, making his buttocks ſquare, his thighs round, his Legs ſtrait and ſhort joynted, his Knees round and big, his hooſes or claws long and hollow, his tayl long and buſh-haired, his Piſle round and alſo well haired. Theſe Bulls as they are for breed, ſo they are excellently good for the draught, only they naturally draw better ſingle, like horſes, then in the yoke, like Oxen: the reaſon as I ſuppoſe being, becauſe they can hardly be matcht in an equal manner.

The uſe of the Bull.

Now

Now for the Cow, you shall chuse her of the same Country with your Bull, and as near as may be of one colour, only her bag or udder would ever be white, with four teats and no more, her belly would be round and large, her forehead broad and smooth, and all other parts such as are before shewed in the male kind. Of the Cow, and her shape.

The use of the Cow is two-fold, either for the Dairy or for breed: the Red Cow giveth the best milk, and the black Cow bringeth forth the goodliest Calfe. The young Cow is the best for breed, yet the indifferent old are not to be refused. That Cow which giveth milk longest is best for both purposes, for she which giveth milk not long, but becomes dry, looseth half her profit, and is less fit for teeming: for commonly they are subject to feed, and that straineth the Womb or Matrix. Of her use.

Now for calves: there are two wayes of breeding them, the one to let them run with their Dams all the year, which is best and maketh the goodliest beast: the other to take them from their Dams, after their first sucking, and so bring them up upon the finger, with flotten milk, the cold only being taken away and no more; for to give a young Calfe hot milk, is present death, or very dangerous. If your Calfe be calved in five dayes after the change: which is called the *Prime*, do not rear it, for most assuredly it will have the Sturdy, therefore preserve it only for the Butcher; also when you preserve those male Calves, which shall be Bulls, then geld the rest for Oxen, and the younger they are gelt the better: the best time for rearing of Calves is from *Michaelmas* till *Candlemas*. A Calfe would be nourished with milk twelve weeks, only a fortnight before you wean it from milk, let the milk be mixt with water. After your Calfe hath drunk one moneth; you shall take the fineſt, sweetest and softest hay you can get, and putting little wisps into cloven sticks, place them so as the Calfe may come to them and learn to eat Hay. After our Ladies day, when the weather is fair, you may turn your Calves to grass, but by no meanes let it be ranke, but short and sweet, so that he may get it with some labour. Of Calves, and their nourishing. Observations.

Now of the Oxe: you shall understand that the larger are the best and most profitable; both for draught or feeding, for he is the strongest to indure labour, and best able to containe both flesh Of the Oxe and his use.

and tallow. Now for his shape it differeth nothing from that of the Bull, only his Face would be smooth, and his Belly deeper. That Oxe is fittest for the yoke which is of gentle nature, and most familiar with the Man. In matching your Oxen for the yoke, let them be near as may be, of one height, Spirit and strength, for the stronger will ever wrong the weaker, and the duller will injure him that is of freer Spirit, except the driver be careful to keep the dull Oxe to his labour. Oxen for the yoke would by no means be put beyond their ordinary pace: for violence in travel heats them, heat breeds surfeits, and surfeits those diseases which makes them unapt to feed or for any other use of goodness. Your Oxe for the yoke will labour well with Barley-straw or Pease-straw, and for blend fodder, which is Hay and Straw mixed together, he will desire no better feeding.

Of his Food. for labour.

Now for your Oxe to feed, hee would as much as might be, be ever lusty and young of years, or if old, yet healthful and bruised, which you shall know by a good taile, and a good Pyzel, for if the Hair of one or both be lost, then he is a waster, and he will be long in feeding. If you do see the Oxe doth lick himself all over, it is a good sign that he is market-able and well fed, for it shews soundness, and that the Beast taketh a joy in himself: yet whilst he doth so lick himself he feedeth not, for his own pride hindereth him, and therefore the Husbandman will lay the Oxes own dung upon his hide, which will make him leave licking and fall to his Food. Now if you go to chuse a fat Beast you shall handle his hindmost Rib, and if it be soft and loose like down, then it shews the Oxe is outwardly well fed; so doth soft huckle-bones, and a big natch round and knotty: if his Cod be big and full, it shews he is well tallowd, and so doth the crop behind the Shoulders: if it be a Cow, then handle her Navil, and if that be big, round and soft, surely she is well tallowed. Many other observations there are, but they be so well known, and common in every mans use, that they need no curious demonstration.

Oxen to feed for the Butcher.

To preserve Cattel in health.

Now for the preservation of these Cattel in good and perfect health, it shall be meet that for the young and lusty, & indeed generally for all sorts, except Calves, to let them blood twice in the year, namely the Spring and Fall, the Moon being in any of the lower

lower signs, and also to give them to drink of the pickle of *Olives*, mixed with a head of *Garlick* bruised therein; and for your Calves, be only careful that they go not too soon to grass, and small danger is to be feared. Now notwithstanding all a mans carefulness, Beasts dayly do get infirmities; and often fall into mortal extremities: peruse therefore these Chapters following, and you shall find cure for every particular disease.

CHAP. II.

Of the Feaver in Cattel.

CAttel are most subject unto a Feaver, and it cometh either from surfeit of blood, being raw and musty, or from flux of cold humors ingendred by cold keeping: the signs are trembling, heavy eyes, a foaming mourh, and much groaning: and the cure is, *you shall let him blood, and then give him to drink a quart of Ale, in which is boyled, three or four Roots of Plantane, and two spoonfuls of the best London Treacle, and let his Hay be sprinkled with Water.* The Cure.

CHAP. III.

Of any inward sickness in Cattel.

FOr any inward sickness or drooping in Cattel, take a quart of strong Ale, and boyl it with a handful of Wormwood, and half a handful of Rue; then strain it, and add to it two spoonfuls of the juyce of Garlick, and as much of the juyce of Housleek, and as much *London Treacle*, and give it the Beast to drink being no more but luke-warm.

CHAP. IV.

Of the Disease in the Head, as the Sturdy or Turning-evil.

THis disease of the Sturdy is known by a continual turning about of the Beast in one place; and the cure is to cast the Beast, and having made his feet fast, to slit the upper part of his forehead crosse-wise about four inches each way, then turning up the Skin and laying the Skull bare, cut a piece out of the Skull two inches square or more; then look, and next unto the panicle of the Brain, you shall see a bladder lye full of water and blood, which The Cure.

which you shall very gently take out, and throw away; then anoint the place with warm fresh Butter, turn down the Skins, and with a needle and a little Red silk, stitch it close together; then lay on a hot Plaister of Oyl, Turpentine, Wax, and a little Rosin melted together with Flax-hurds, and so folding warm woollen cloath about the head, let the beast rise, and so remain three or four dayes ere you dress it again, and then heal it up like another wound, only observe in this cure, by no means touch the brain, for that is mortal, and then the help is both common, and most easie.

CHAP. VI.

Of Diseases in the eyes of Cattel, as the Haw, a Stroak, Inflammation, Weeping, or the Pinne or Weble.

FOr any generall soreness in the eyes of Cattel, take the water of *Eye-bright*, mixt with juyce of *Housleek*, and wash them therewith, and it will recover them: but if a Haw breed herein then you shall cut it out, which every simple Smith can do. But for a Stroak, Inflammation, Pin or Web, which breeds excresions upon the eyes; take a new laid Egge, and put out half the white: then fill it up with Salt, and a little Ginger, and roste it extrem hard in hot Cinders: which done, beat it to powder shell and all; but before you roast it, wrap it in a wet cloath, and put of this powder into the beasts eye, and it will heal and cure it.

CHAP. VI.

Of diseases in the mouth, as barbs under the tongue, blain on the tongue, teeth-loose, or tongue venomed.

THose Barbs, or paps which grow under the tongues of Cattell, and being inflamed do hinder them from feeding, you shall with a keen pair of sheers cut away close by the flesh, and if they bleed much, (as they will do if they be rank) you shall then with a red hot bodkin seare them, and drop on the top of the seared places a drop or two of Rosin and Butter mixt together; but if they bleed not, then only rub them with Sage and Salt, and they will heal. Now for the Blain on the tongue, of some called the Tin-blain; it is a blister which groweth at the roots

roots of the tongue, and cometh through heat of the Stomach and much chafing, and is oft very mortal, for it will riſe ſo ſuddenly and ſo big that it will ſtop the wind of the Beaſt. The Cure is, to thruſt your hand into the mouth of the Beaſt, and drawing out his tongue, with your nayl to break the bliſter, and then to waſh the ſore place with ſtrong brine or Sage, Salt, and Water: if you find more bliſters then one, break them all, and waſh them, and it is a preſent cure. Now for looſe teeth, you ſhall let the Beaſt blood in his gums, and under his tayle, then waſh his chaps with Sage and Woodbine leaves, boyld in brine: laſtly, if the tongue be venomed, which you ſhall know by the unnatural ſwelling thereof, you ſhall take Plantane and boyling it with Vinegar and Salt, waſh the tongue therewith, and it will cure it. The Cure.

CHAP. VII.

Of diſeaſes in the Neck, as being galled, bruiſed, ſwoln, out of joynt or having the Cloſh.

IF any Oxes neck be galled, bruiſed, or ſwoln with the yoke: take the leaves of round *Ariſtolochia*, and beating them in a Mortar with Tallow or freſh Greaſe, anoint the ſore place therewith, and it will not only heal it, but any ſtrain in the Neck, even if the bone be a little diſordered. Now for the *Cloſh* or *Clowſe* which cauſeth a Beaſt to pill and looſe the hair from his Neck, and is bred by drawing in wet and rainy weather, you ſhall take the aſhes of an old burnt ſhoo, and ſtrew it upon the Neck, and then rub it over with Tallow and Turpentine mixt together.

CHAP. VIII.

Of the Peſtilence, Gargil or Murrain in Beaſts.

THis Peſtilence or Murrain amongſt Beaſts is bred by divers occaſions; as from rankneſs of blood, or feeding, from corruption of the air, intemperateneſs of the weather, inundation of floods, or the infection of other Cattel; much might be ſaid of the violence and mortality thereof, which hath utterly unfurniſhed whole Countries. But to go to cure, *you ſhall give to all your Cattel, as well the ſound as ſick, this Medicine which never failed to preſerve as many as have taken it*: take of old Urine a quart, and mixe it with a handful of Hens dung diſſolved therein, and let your Beaſt drink it. The Cure.

CHAP

CHAP. IX.

Of the miſliking or leanneſs of Beaſts.

IF your Beaſt fall into any unnaturall miſs-like or leanneſs which you ſhall know by the diſcolouring of his Hair; you ſhall then cauſe him firſt to be let blood, and after take ſweet Butter and beat it in a Mortar, with a little *Mirrh*, and the ſhaving of *Ivory*, and being kept faſting, make him ſwallow down two or three Balls thereof; and if it be in the Winter, feed him with ſweet Hay; if in the Summer, put him to graſs.

CHAP. X.

Of the diſeaſe in the Guts, as Flux, Coſtiveneſs, Cholick, and ſuch like.

IF your Beaſt be troubled with any ſore laxe or bloody-Flux, you ſhall take a handful of the ſeeds of *Wood-roſe*, and being dryed and beaten to powder, brew it with a quart of ſtrong Ale and give it the Beaſt to drink. But if he be too dry or coſtive in his body, then you ſhall take a handful of *Fœnugreek*, and boyl it in a quart of Ale, and give him to drink; but for any cholick or belly-ake or gnawing of the Guts, boyl in the water which he drinketh good ſtore of Oyl, and it will help him.

CHAP. XI.

Of piſſing of Blood.

IF your Beaſt piſs blood, which cometh either of over-labouring or of hard and ſower feeding, you ſhall take *Shepherds-purſe*, and boyl it in a quart of red Wine, and then ſtrain it, and put to it a little *Cinnamon*, and ſo give it the Beaſt to drink.

CHAP. XII.

Of dropping noſtrils, or cold in the Head.

IF your Beaſts noſtrils run continually, which is a ſign of cold in the Head, you ſhall take *Butter* and *Brimſtone* and mixing them together, anoint two Gooſe-feathers therewith, and thruſt them up into the noſtrils of the Beaſt, and uſe thus to do every morning till they leave dropping.

CHAP.

CHAP. XIII.

Of any swelling in a Beast whatsoever.

IF your Beast have any outward swelling, Bath it with Oyl and Vinegar exceeding hot, and it will asswage it: but if the swelling be inward, then boyl round *Aristolochia* in his water.

CHAP. XIV.

Of the Worm in the Tayle.

THere is a Worm which will breed in the tayl of a Beast, and doth not only keep him from feeding, but also eateth away the hair of the tayl and disfigureth the Beast. The cure is, to wash the tayl in strong *Lye* made of *Urine* and *Ash-woodashes* and that will kill the Worm, and also heal and dry up the sore. The Cure.

CHAP. XV.

Of any Cough or shortness of breath in Cattel.

IF your Beast be troubled with the Cough or shortness of breath you shall give him to drink divers mornings together a spoonfull or two of Tarr, dissolved in a quart of new milk, and a Head of Garlick clean pill'd and bruised.

CHAP. XVI.

Of any Impostbume, Bile or Botch in a Beast.

IF your Beast be troubled with any Impostbume, Bile or Botch, you shall take Lilly-roots and boyl them in milk till they be soft, so that you may make them like pap: then being very hot clap them to the sore, and then when it comes to be soft, open it with a hot iron, and let out the filth, then heal it up with Tarr, Turpentine and Oyl mixt together.

CHAP. XVII.

Of diseases in the Sinews, as weakness, stiffeness or soreness.

IF you find by the unnimble going of your Beast, that his Sinews are weak, shrunk or tender: Take *Mallows* and *Chickweed* and boyl them in the Dregs of Ale or in Vinegar, and being

very hot, lay it to the offended member, and it will comfort the sinews.

CHAP. XVIII.

Of the general Scab, particular Scab, Itch or Scurf in Cattel.

IF your Beast be troubled with some few Scabs here and there on his body, you shall rub them off, and anoint the place with black Sope and Tarr, mixt together, and it will heal them. But if the Scab be universal over the body, and the Scabs mixt with a dry Scurf, then you shall first let the Beast blood, after rub off the Scabs and Scurf till the Skin bleed, then wash it with old Urine and green Copperas together, and after the bathing is dry, anoynt the body with Bores grease and Brimstone mingled together.

CHAP. XIX.

Of the hide-bound, or dry Skin in Cattel.

THis greif cometh of over-much labour and evil keeping, and above all other Beasts your *Lincoln-shire* Oxen are subject unto it, the signs are a discoloured and hard Skin, with much leanness: the cure is, to let him blood, and to give him to drink a quart of good strong Ale brewed with *Mirrh*, and the powder of *Bay-berries*, or for want of Berries the Bay-tree leaves; and then keep him warm and feed him with Hay that is a little mow-burnt and only looketh red, but is not dusty or mouldy, for that will get him an appetite to drink, and drinking will loosen his Skin.

The Cure.

CHAP. XX.

Of the diseases in the Lungs, especially the Lung-grown.

THe Lungs of a Beast are much subject to sickness, as may appear by much panting, and shortness of breath, the signs being a continual coughing, but that which is before prescribed for the Cough will cure all these, only for a Beast which is Lung-grown, or hath his Lungs grown to his side, which cometh through some extreme drought taken in the Summer season, and is known by the Cough, hoarse or hollow coughing; you shall take a pint of *Tanners ooze*, and mix it with a pint of new milk, and

and one ounce of brown Sugar Candy, and give it the Beast to drink, this hath been found a present cure; or to give him a ball as big as a mans fist, of Tar and Butter mixt together, is a very certain cure.

CHAP. XXI.

Of biting with a Mad Dog, or any other venemous Beast.

IF your Beast be bitten with a mad Dog, or any other venemous Beast, you shall take *Plantane*, and beat it in a Mortar with *Bole-armenick*, *Sanguis Draconis*, Barley meal, and the whites of Egs, and plaister-wise lay it to the sore, renewing it once in fourteen hours.

CHAP. XXII.

Of the falling down of the Palate of a Beasts mouth.

LAbour and drought will make the Palate of a Beasts mouth to fall down, which you shall know by a certain hollow changing in his mouth when he would eat, also by his sighing and a desire to eat but cannot. The ordinary cure is, you shall cast the Beast, and with your hand thrust it up; then let him blood in the palate, and anoint it with Honey and Salt; and then put him to grass, for he may eat no dry meat. The Cure.

CHAP. XXIII.

Of any greif or pain in the hoof of a Beast, and of the Foule.

TAke *Mugwort*, and beat it in a Mortar with hard *Tallow*, and apply it to the hoof of the Beast, and it will take away any greif whatsoever. But if he be troubled with that disease, which is called the *Foule*, and cometh most commonly by treading in a mans ordure, it breedeth soreness & swelling between the cloyes: you shall for the cure cast the Beast, and with a Hay rope rub him so hard between the same, that you may make him bleed, then anoint the place with *Tarr*, *Turpentine* and *Kitchin-fee*, mixt together; and keep him out of the dirt, and he will soon be whole. The Cure.

CHAP. XXIV.

Of bruisings in general, on what part of the body soever they be.

TAke *Brooklime* the less, and fry it with Tallow, and so hot lay it to the bruise, and it will either expel it, or else ripen it, break it, and heal it, as hath been often approved.

CHAP. XXV.

Of swallowing down Hens-dung, or any poysonous thing.

IF your Beast have swallowed down Hens-dung, Horse-leeches, or any other poysonous thing, you shall take a pint of strong Vinegar, and half so much Oyl: or sweet Butter, and two spoonfulls of *London-treacle*; and mixing them together on the fire give it the Beast warm to drink, and it will cure him.

CHAP. XXVI.

Of killing Lice or Tickes.

BEasts that are bred in Woods under dropping of Trees, or in barren and unwholesome places are most subject to Lice, Tickes, and other Vermine. The cure whereof is to anoint their body with fresh Grease, Pepper, Staveſaker and Quicksilver, beaten together until the Quicksilver be slain.

The Cure.

CHAP. XXVII.

Of the Dewbolu, or general Gargil.

HOwsoever some of our *English* Writers are opinioned, this *Dewbolu* or general *Gargil*, is a poysonous and violent swelling, beginning at the neather part of the *Dewlap*; and if it be not prevented, the swelling will ascend upward to the Throat of the Beast, and then it is incurable: therefore for the preservation of your Beast, as soon as you see the swelling appear, cast the Beast and slit the swelled place of the *Dewlap*, at least four inches in length; then take a handful or two of *Speare-grass*, or *Knot-grass* and thrusting it into the wound, stitch it up close; then anoint it with *Butter* and *Salt*, and so let it rot and wear away of it self: if you perceive that his body be swell'd, which is a sign that the poyson is dispersed inwardly, then it shall be

good

good to give him a quart of *Ale* and *Rue* boyl'd together, and so to chafe him up down well, both before and after.

CHAP. XXVIII.

Of loss of the Cud.

A Beast will many times through careleſnes in chewing, loſe his Cud, and then mourn and leave to eat: The certain cure whereof is to take a little ſower *Leaven* and *Salt*, and beating it in a mortar with mans *Urine* and *Lome*, make a pretty big ball and force him to ſwallow it down, and it will recover his Cud. The Cure

CHAP. XXIX.

Of killing of all ſorts of Worms, either in the Oxe, Cow or Calfe.

THere is nothing killeth Worms in the bodies of Cattel ſooner then *Savin* chopt ſmall, and beaten with ſweet *Butter*, and ſo given in round balls, to the Beaſt; nor any thing maketh them void them ſo ſoon as ſweet *Wort* and a little black *Sope*, mixt together, and given the Beaſt to drink.

CHAP. XXX.

Of the vomiting of Blood.

THis diſeaſe cometh of the rankneſs of blood got in Fruitful Paſtures after hard keeping, inſomuch that you ſhall ſee the blood flow from their mouths. The cure is, firſt to let the Beaſt blood, and then give to drink *Bole-armenick* and *Ale* mixt together. The Cure.

CHAP. XXXI.

Of the Gout in Cattel.

IF your Beaſt be troubled with the Gout, which you ſhall know by the ſudden ſwelling of his joynts, and falling again, you ſhall take *Galingall*, and boyl it in the dregs of *Ale* and ſweet *Butter*, and Pultis-wiſe lay it to the offended member.

CHAP. XXXII.

Of Milting of a Beaſt.

MIlting is when a Beaſt will oft fall, and oft riſe, as he is at his labour, and cannot indure to ſtand any while together it proceeds from ſome ſtroke or bruiſe, either by cudgil or other blunt weapon: And the cure is, not to raiſe him ſuddenly, but to give him *Ale*, and ſome ſtone *Pitch* mixt very well together to drink.

CHAP.

CHAP. XXXIII.

Of provoking a Beast to pisse.

IF your Beast cannot pisse, steep *Smallage*, or the roots of *Raddish* in a quart of *Ale* and give it him to drink, and it presently helpeth.

CHAP. XXXIV.

Of over-flowing of the Gall in Beasts.

THe over-flowing of the Gall, is ever known by the yellowness of the Skin, and the eyes of the Beast: And the cure is, to give him a quart of Milk, Saffron and Turmerick mixt together, to drink after he hath been let blood, and so do three mornings together.

CHAP. XXXV.

Of a Beast that is goared, either with a Stake, or the horn of another Beast.

TAke *Turpentine* and *Oyl*, and heat them on the Coals, and then taint the wound therewith, and it will heal it.

CHAP. XXXVI.

Of a Cow that is whethered.

THis disease is; when a Cow after her calving cannot cast her cleaning, and therefore to compel her to cast it, you shall take the juyce of *Betony*, *Mugwort* and *Mallowes*, of each three spoonfulls, and mix it with a quart of Ale, and give it the Beast to drink: and also give her to eat scorched Barley, and it will force her to avoid her burthen suddenly.

CHAP. XXXVII.

Of drawing out stubs or Thorns.

TAke black Snails and black Sope, and beat them to a salve, and apply them to the sore, and it will draw the greif to be apparent.

CHAP. XXXVIII.

Of purging of Cattel.

THere is nothing doth purge a Beast so naturally, as the green weedy grass which groweth in Orchards under trees, nor any Medicine doth purge them better than *Tarr*, *Butter* and *Sugar-Candy* mixt together, and given in balls as big as an Hens Eg.

CHAP.

CHAP. XXXIX.

Of being shrew-run or shrew-bitten.

A Shrew Mouse, which is a Mouse with short uneven legs, and a long head like a Swines, is venemous, and if it bite a Beast, the sore will swell and rankle, and put the Beast in danger: but if it only run over a Beast; it feebleth his hinder parts, and maketh him unable to go: The cure then for being shrew-bitten, is the same which is formerly shewed for the biting of other venemous Beasts: But if he be shrew-run, you shall only draw him under, or beat him with a bramble, which groweth at both ends in the Furrows of Corn lands.

CHAP. XL.

Of faintness in Labour.

IF your Beast in his Labour, and heat of the day chance to faint you shall loose him, and drive him to the running stream to drink, and then give him two or three Ospines full of parch'd Barley to eat, and he will labour fresh again.

CHAP. XLI.

Of breeding Milk in a Cow.

IF your Cow after your Calving cannot let down he Milk; you shall give her a quart of strong Posset-Ale, mixed with *Annis-seeds* and *Coliander-seeds*, beaten to powder, to drink every morning, and it will not only make her Milk spring, but also increase it wonderfully.

CHAP. XLII.

Of Bones out of joynt or bones broken.

IF any Beast have a bone broken, or misplaced, after you have set it right, and in his true place, you shall wrap a plaister about it made of *Burgundy-Pitch*, *Tallow* and *Linseed-oyl*, and then splent it, and let it remain unbound 15 days, and it will do much good.

CHAP. XLIII.

Of the Rot in Beasts.

IF your Beast be subject to rottenness, which you may know by his leanness, mislike, and continually scowring behind: you shall take *Bay-berries*, beaten to powder, Mirrh, Ivy-leaves, Elder-leaves and Feather-few, a good lump of dry Clay, and Bay-salt, mix these together in strong Urine, and being warm, give the

the Beast half a pint thereof to drink, and it will knit and preserve them.

CHAP. XLIV.

Of the Pantas.

THe Pantas is a very faint disease, and maketh a Beast to sweat, shake, and pant much. The cure is, to give him Ale and Urine mixt together, a little soot and a little earning to drink two or three mornings before you labour him.

CHAP. XLV.

Of all manner of Wounds in Beasts.

TO cure any Wounds in Beasts, given by edge-tools, or otherwise, where the Skin is broke; take Hogs-grease, Tarr, Turpentine and Wax, of each a like quantity, and a quarter so much Verdigrease, and melt them altogether into one salve, and apply it to the wound, by spreading it upon a Cloath, and it will heal it without any rank or dead flesh.

The end of the Bull, Oxe, Cow and Calfe, &c.

Of Sheep.

CHAP. I.

Of Sheep in general, their use, choice, shape and preservation.

TO enter into any long discourse of praise or profit of sheep or to shew my reading by relation of the Sheep of other Countries, were frivolous; because I am to write much in a very little Paper, and I speak only to my Countrey-men, the *English*, who desire to learn & know their own profit. Know then that:

that whosoever will stock himself with good sheep, must look into the nature of the soyle in which he liveth: For sheep according to the earth and air in which they live, do alter their nature and properties: The barren Sheep becoming good in good soiles, and the good Sheep barren in evil soils. If then you desire to have Sheep of a curious fine staple of Wool, from whence you may draw a thread as fine as silk, you shall see such in *Hereford shire*, about *Lempster* side, and other special parts of that County; in that part of *Worcestershire* joyning upon *Shropshire*, and many such like places: yet those Sheep are very little of bone, black faced, and bear a very little burthen. The sheep upon *Cotsal* hills are of better bone, shape, and burthen, but their staple is courser and deeper. The Sheep in that part of *Worcestershire*, which joyneth on *Warwickshire*, and many parts of *Warwickshire*, all *Leicestershire*, *Buckinghamshire*, and part of *Northamptonshire*; and that part of *Nottinghamshire* which is exempt from the Forrest of *Sherwood*, beareth a large boned sheep of the best shape, and deepest staple; chiefly if they be pasture sheep, yet is their wool courser than that of *Cotsal*: *Lincolnshire* especially in the salt Marshes, have the largest Sheep, but not the best Wool, for their legs and bellies are long and naked, and their staple is courser than any other: the Sheep in *Yorkshire*, and so Northward, are of a reasonable big bone, but of a staple rough and hairy, and the *Welsh* Sheep are of all the worst, for they are both little, and of worse staple; and indeed are praised only in the dish, for they are the sweetest Mutton.

Of the choice of sheep.

If now, knowing the natures and properties of the Sheep of every Country, you go about to stock your ground, be sure to bring your Sheep from a worse soil to a better, and not from a better to a worse. The Lear, which is the earth on which a sheep lyeth, and giveth him his colour, is much to be respected: the red Lear is held the best; the duskish, inclining to a little redness is tolerable; but the white or dirty Lear is stark naught. In the choice therefore of your Sheep, chuse the biggest boned, with the best wool; the staple being soft, greasie, well curled and close together, so that a man shall have much ado to part it with his fingers. These sheep besides the bearing of the best burthen, are alwaies the best Butchers ware, and go sooneſt away in the Mar-

Of the Lear.

ket. Therefore, in the choice of sheep for your breed, have a principal respect to your Rams, for they ever mar or make a flock: let them as near as you can, have these properties or shapes. First, large of body in every general part, with a long body, and a large belly, his forehead would be broad, round, and well rising, a cheerful large eye, strait short nostrils, and a very small muzzel; by no means any horns, for the dodder sheep is the best breeder, and his Issue never dangereth the Dam in yeaning, as the horned sheep do: besides, those sheep which have no horns, are of such strength of head, that they have oft been seen to kill those sheep which have the largest horns, and best wrinkled: A sheep would have a large upright neck, somewhat bending like the neck of a horse, a very broad back, round buttocks, a thick tail, and short joynted legs, small, clean and nimble, his wool would be thick and deep, covering his belly all over; also his face, and even to his nostrils, and so downward to his very knees and hinder houghs. And thus according to the shape, properties and soil from whence you chuse your Rams, chuse the rest of the flock also.

The shape of a sheep.

The best time for your Ewes to bring forth their young ones is, if they be pasture sheep, about the latter end of *April*, and so until the beginning of *June*; but if they be field sheep, then from the beginning of *January* till the end of *March*, that their Lambs may be strong and able before *May* day, to follow their Dams over the rough Fallow-lands, and Water-furrows, which weak Lambs are not able to do: and although you yean thus early in the Winter, when there is no grass springing, and the sharpness of the weather also be dangerous, yet the husbandman must provide shelter and sweet fodder, and the shephard with great vigilance be stirred at all hours, to prevent evils, for the reasons before shewed, and though the Ewe at the first be scant of Milk, yet as the warm weather increaseth, and the grass beginneth to spring, so will her milk spring also.

When Ewes should bring forth.

Now for your Lambs: about *Michaelmas* you shall separate the male from the female; and having chosen out the worthiest, which you mean to keep for Rams, put them aside, and then gueld the rest, which every orderly Shephard can do sufficiently, for there is no danger in guelding young Lambs. The first year a male Lamb is called a weather hog, and a female Lamb

Ordering Lambs.

an

an Ewe hog: the second year the male is a Weather, and the female a Theafe, and then she may be put to the Ram: but if you let her go over that year also, then she is a double Theafe, and will both her self be the goodlier sheep, and also bring forth the goodlier Lamb; whence it comes, that the best sheep-masters, make more account of the double Theafe, than of any other breeder.

Needful observations.

You shall observe never to shear your Lambs till they be full hogs: you shall ever wash three daies before you shear: the best time of shearing is from *June* to *August*. Ewes are ever good breeders, from three years old till their mouths break. If you would have your Ewes bring forth male Lambs, note when the North wind bloweth, and driving your flock against the wind, let your Rams ride as they go, and this will make the Ewes to conceive male lambs: so likewise, if you would have female lambs, put your Rams to the Ewes when the wind bloweth out of the South.

Now for the general preservation of sheep, feed them as much as you can upon high grounds, which are dry and fruitful, the grass sweet, yet so short that it must be got with much labour but if you must force-perforce feed upon low and moist grounds which are infectious; you shall not bring your sheep from the fold (for I now speak to the honest English husbandman) until the Sun be risen, and that the beams begin to draw the dew from the earth, then having let them forth, drive them to their place of feed, and there with your dog chase them up and down till they be weary, and then let them either feed or take their rest, which they please. This chasing first, beateth away mill dews; and all other dews from the earth, as also those webs, kells, and flakes which lying on the earth, and a sheep licking them up, do breed rottenness: Also this chasing stirreth up that natural heat in a Sheep, which drinketh up, and wasteth the abundance of moisture, which else would turn to rottenness. Besides, a Sheep being thus chased and wearied, will fall to his food more deliberately, and not with such greediness, as otherwise he would, and also make choice of that meat which is best for his health. If a Shepherd once in a month, or alwaies when he hath occasion to handle his Sheep, rub their mouths with Bay-salt, it

is an excellent preservation against all manner of sickness, and very comfortable for a Sheep also, for a Sheep will very well live, and abate of his flesh by rubbing his mouth once a day with Bay-salt only. Now, forasmuch as notwithstanding these principles, a Sheep falleth into many infirmities; hereafter followeth the several cures of all manner of diseases.

CHAP. II.

The signs to know a sound sheep, and an unsound sheep.

IF a Sheep be sound and perfect, his eye will be bright and cheerful, the white pure without spot, and the strings red, his gums also will be red, his teeth white and even, his skin on his brisket will be red, and so will each side betwixt his body and his shoulder where wool grows not, his skin in general will be loose, his wool fast, his breath long, and his feet not hot: but if he be unsound, then these signs will have contrary faces; his eyes will be heavy, pale, and spotted, his breast and gums white, his teeth yellow and foul, his wool when it is pulled will easily part from his body; and when he is dead open him, and you shall find his belly full of water, his fat yellows his liver putrified, and his flesh moist and watrish.

CHAP. III.

Of sickness in general, or the Feaver amongst Sheep.

CHange of pasture is a great cure for sick Sheep; yet if you find any more particularly troubled then the rest, take *Puliol-Royal*, and stamping it, mix the juyce with water and vinegar the quantity of half a pint, and give it the Sheep with a horn, luke-warm; and by no means let the Sheep be much chafed: Also in these sicknesses the Shepherd must have a great care to note from whence the disease groweth: if it proceed from cold, then to drive his sheep to shelter; if from heat, then to feed them in shady and cool places.

CHAP. IV.

Of the general Scab or Itch in Sheep.

THe general Scab or Itch in Sheep, is of all diseases the most common among them; proceeding from rainy and wet weather, which falling upon their skins, if they happen to be chaft or heated after, they presently break forth into the scabs, which you shall know by a white filthy scurfe sticking upon

their

their skins. And the moſt uſual medicince for the ſame, which all ſhepherds uſe, is to anoint the place with Tar and Greaſe, mixt together; but if upon the firſt appearance of the itch, you ſteep *Puliol-royal* in water, and waſh the skin therewith, it will preſerve them from running into the ſcab.

CHAP. V.

Of killing Maggots in Sheep.

IF a Sheep be troubled with Maggots you ſhall take *Gooſe-greaſe*, *Tar*, and *Brimſtone*, and mix them together on the fire; and then anoint the place therewith, and it will kill the Maggots.

CHAP. VI.

Of the red water.

THe red Water is a poiſonous diſeaſe in Sheep, offending the heart, and is indeed as the peſtilence amongſt other cattel, therefore when you find any of your Sheep infected therewith, you ſhall firſt let him blood in the foot, between the claws; and alſo under the tail, and then lay to the ſore places *Rue* or *Wormwood* beaten with Bay-ſalt, and it helpeth.

CHAP. VII.

Of Lung-ſick, or any Cough or Cold.

IF your Sheep be troubled with any ſickneſs in his Lungs, which you ſhall know by his coughing and ſhortneſs of breath, you ſhall take *Fuſſilago* or *Coltsfoot* and *Lungwort*, and ſtamping them, ſtrain the juyce into a little hony and water, and give it the Sheep to drink.

CHAP. VIII.

Of the Worm in the Claw of the Sheep, or any other part.

THis worm breedeth commonly before, between the claws of the foot: but whereſoever it breedeth it is known by the head, which is like a tuft of hair, and will ſtick forth in a bunch. The cure is to ſlit the foot, and draw out the worm without breaking it; and then anoint the place with Tar and Tallow mixt together, for Tar ſimply of it ſelf will draw too much. The Cure.

CHAP. IX.

Of the Wildfire in Sheep.

THis diſeaſe which is called the Wildfire, is a very infectious ſickneſs, and will indanger the whole flock, but howſoever incurable

incurable it is held, yet it is certain, that if you take *Chervile*, and ſtamping it with old *Ale*, make a ſalve thereof, and annoint the ſore therewith, it will kill the fire, and ſet the Sheep ſafe: and though ſome, for this diſeaſe, bury the firſt infected Sheep alive, with his heels upward, before the Sheep coat dore, yet this medicine hath been ever more effectual.

CHAP. X.

Of the diſeaſe of the Gall, as Choller, Faundiſe, and ſuch like.

The Cure. THeſe diſeaſes are known by the yellowneſs of the Sheeps skinne: and the cure is, to take *Plantane* and *Lettuce*, and ſtamping them together, mix their juice with vinegar, and give half a pint to a Sheep, to drink.

CHAP. XI.

Of the tough fleam, or ſtopping in Sheep.

IF your ſheep be ſtopt in the head, breſt, or weſſand, either with tough fleam, or other cold humours, which you ſhall know by the running of the noſtrils; then take the powder of *Puliol-royal*, and mixing it with clarified Hony, diſſolve it in warm water, the quantity of half a pint, and give it the Sheep to drink, and it will looſen the flegm.

CHAP. XII.

Of bones broken in ſheep, or bones out of joint.

IF your Sheep chance to break a leg, or have any other bone miſplaced, you ſhall after you have ſet it ſtraight and right again, firſt bathe it with oyle and wine, and then dipping a cloath in molten *Patchgreaſe*, roul it about, and ſplint it as occaſion ſhall ſerve, and ſo let it remain nine daies, and dreſs it again, and at the end of the next nine daies, the Sheep will be able to go.

CHAP. XIII.

Of any ſickneſs in Lambs.

IF your Lamb be ſick, you ſhall give it *Mares-milk*, or *Goats-milk*, or the own dams milk and Water to drink, and keep it very warm.

CHAP.

CHAP. XIV.

Of the Sturdy, turning-evil, or more-found.

THese diseases proceed from rankness of blood, which offendeth the brain, and other inward parts. The cure then is to let the Sheep blood in the eye veins, temple veins, and through the nostrils, then to rub the places with young Nettles bruised. The Cure.

CHAP. XV.

Of diseases in the eyes, as the Haw, dimness, or any soreness.

IF your Sheep have any imperfection in his eyes, you shall drop the juyce of *Selandine* into them, and it is a present help.

CHAP. XVI.

Of water in a Sheeps belly.

IF a Sheep have water in his belly between the outward flesh and the rim, then you may safely adventure to let it forth by making a little hole through the flesh, and putting in a quill; but if it be between the rim and the bag, then it is incurable, for you may by no means cut the rim asunder: When the water is let forth, you shall stitch up the hole, and anoint it with Tar and Butter mixed together: This water if it remain in the body, will rot the sheep.

CHAP. XVII.

Of the Tag'd or Belt in Sheep.

A Sheep is said to be Tag'd or Belt, when by a continual squirt running out of his ordure, he berayeth his tail, in such wise, that through the heat of the dung it scaldeth, and breedeth the scab therein. The cure is, with a pair of sheers to cut away the tags, and to lay the sore bare and raw, and then to throw earth dryed upon it, and after that Tar and Goose-grease mixt together. The Cure.

CHAP.

CHAP. XVIII.

Of the Pox in Sheep.

The Cure. THe Pox in Sheep are ſmall red pimples like purples riſing on the skin, and they are infectious. The cure is, to take *Roſemary*, and boil the leaves in vinegar, and bathe the ſores therewith, and it will heal them: change of paſture is good for this diſeaſe, and you ſhall alſo ſeparate the ſick from the ſound.

CHAP. XIX.

Of the Wood-evil, or Cramp.

The Cure. THis diſeaſe is weakneſs or ſtraitning of the ſinews got by colds and ſurfeits: it is very mortal, and will run through a whole flock. The cure is, to take *Cinkfoil*, or *Five-leaved-graſs*, and boil in wine, and give the Sheep a pint thereof to drink and keep him warm, and chafe his legs with oyl and vinegar.

CHAP. XX.

Of making an Ewe to love her own Lamb, or any other Ewes Lamb.

IF an Ewe grow unnatural, and will not take to her Lamb after ſhe hath yeaned it, you ſhall take a little of the clean of the Ewe, which is the bed in which the lamb lay, and force the Ewe to eat it, or at leaſt chew it in her mouth, and ſhe will fall to love it naturally: but if an Ewe have caſt her lamb, and you would have her take to another Ewes lamb, you ſhall take the lamb which is dead, and with it rub and daub the live lamb all over, and ſo put it to the Ewe; and ſhe will take as naturally to it, as if it were her own.

CHAP. XXI.

Of licking up poiſon.

The Cure. IF a Sheep chance to lick up any poyſon, you ſhall perceive it by a ſudden ſwelling and reeling of the Sheep. And the cure is, as ſoon as you ſee it ſtagger, to open the mouth, and you ſhall finde one or more bliſters upon the tongue roots, you ſhall preſently break them with your fingers, and rub them with earth or ſage, and then piſs into the ſheeps mouth, and it will do well.

CHAP.

CHAP. XXII.

Of Lambs yeaned sicke.

IF a Lamb be yeaned sick and weak, the Shepheard shall fold it up in his cloak, blow into the mouth of it, and then drawing the Dams dugs, squirt milk into the mouth of it.

CHAP. XXIII.

Of making an Ewe to be easily delivered.

IF an Ewe can hardly bring forth or yean her Lamb, you shall take *Balsamint* or *Horsemint*, and put either the juyce or powder of it into a little strong ale, and give it the Ewe to drink, and she wil yean presently.

CHAP. XXIV.

Of teeth loose.

IF a Sheeps teeth be loose, let him blood in his gums, and under his tayl, and then rub his teeth with Earth, Salt and Sage.

CHAP. XXV.

Of increasing Milk in Ews.

NOthing encreaseth Milk in Ewes more than change of pasture and feeding: driving them one while unto the hills, another while to the Valleys, and where the gras is sweeteſt and short, and the sheep eateth with best appetite, there see you continue longest: for touching, giving them *Fitches*, *Dill*, *Anniseeds*, and such like, this change of ground will make Milk spring much better.

CHAP. XXVI.

Of the staggers, or leaf sickness in Lambs, or elder Sheep.

THe Staggers is ingendered in sheep by surfeiting on Oak-leaves, hawthorn leaves, or such like, which Lambs are very apt unto: it is cold corrupt blood, or flegm, gathered together about the brain: indeed it is suddenly mortal. The best cure is, to take *Assafetida*, dissolved in warm water, and put the quantity of half a spoonful into each ear of the sheep or Lamb, and it is a present remedy. The Cure.

CHAP. XXVII.

Of Worms in the guts of Sheep or Lambs.

SHeep are as subject to worms in their guts or stomachs as any other cattel whatsoever, which you shall know by beating

ting their bellies with their feet, and by looking continually at their bellies. The cure is, to take the leaves of *Coliander*, and to stamp them, and then mixing the juyce thereof with hony, to give the Sheep to drink; and then chase him a little, and keep him two or three hours fasting.

The Cure.

CHAP. XXVIII.

Of the loss of the Cruds.

THat which helpeth the loss of the Crud, in Ox or Cow the same is a present remedy for Sheep, and is spoke of before in a former chapter.

CHAP. XXIX.

Of saving Sheep from the Rot.

THis disease of Rottenness is the cruellest of all other amongst Sheep, and extendeth his violence over all the flock: Nay, over Town-ships and Countries; and though it be held of most men incurable, yet good Government, and this Receipt I shall deliver you, will not only prevent it, but preserve your Sheep safe: Therefore, as soon as you perceive that any of your Sheep are tainted, you shall take *Adraces*; which is a certain salt, gathered from the salt Marshes, in the heat of Summer, when the tide is going away, and leaving certain drops of salt water on the Grass, then the violent heat of the Sun turns it to salt; and to speak briefly, all salt made by the violence of the Suns heat only, is taken for *Adraces*, of which there is infinite store in Spain. With this *Adraces* rub the mouths of all your sheep once a week, and you shall never need to fear the rotting of them, for it hath been well tried, and as I imagine, the experiment is found out from this very ground: It is a rule and well known at this day in *Lincolnshire*, and in *Kent*, that upon the Salt Marshes, sheep did never dye of the rot: no other reason being known therefore; but the licking up of that salt, and without doubt, it is most infallible and most easie.

CHAP. XXX.

A few precepts for the Shepheard.

IT is meet that very good and careful Shepheards know what food is good for Sheep, what hurtful: that following the one and eschewing the other, he may ever keep his cattel in good health.

health. The grass that is most wholsome for Sheep, is that which hath growing in it good store of *Melilote*, *Clover*, *Self-heal*, *Cinquefoil*, *Broom*, *Pimpernel*, and *White Henbane*.

The grass which is unwholsome for Sheep, is that which hath growing amongst it, *Spare wort*, *Penny wort*, or *Penny grass*, and any weeds which grow from inundation or over-flows of water; likewise, *Knot-grass* is not good, nor mildewed grass. Of all Rots, the hunger Rot is the worst, for it both putrifieth the flesh and skin, and this most incident to field Sheep, for to pasture Sheep it never happeneth. The next Rot to it is the pelt Rot, which commeth by great store of Rain, immediately after a Sheep is new shorn, which, mildewing the skin, corrupteth the body; and this also is most incident to field Sheep, which want shelter.

There be little white Snails which a Sheep will lick up, and they will soon rot him.

There will grow upon Ewes teats little dry scabs, which will stop their milk, when the Lambs suck; the Shepheard must have a care to pull them away.

A Sheep will have a bladder of water under his chin sometimes which the Shepheard must be careful to let out and lance, or the Sheep will not prosper.

It is not good to shear Sheep before Midsummer, for the more hee sweateth in his Wool, the better and more kindly it is.

If you will know the age of your Sheep, look in his mouth; and when he is one shear, he will have two broad teeth afore: When hee is two shear, he will have four broad teeth afore: when he is three, hee will have six; and when he is four shear, he will have eight: and after those years his mouth will begin to break: For touching that Rule of the evenness and unevenness of the mouth, it is uncertain, and faileth upon many occasions.

The end of the Sheep.

Of Goats.

CHAP. I.

Of Goats and of their Natures.

SEeing Goats are not of any general use in our Kingdome, but only nourished in some wild and barren places, where cattle of better profit can hardly be maintained, as in the mountainous parts of *Wales*, in the barrennest parts of *Cornwal* and *Devonshire*, on *Malborn* hills, and some few about the *Peak*; I will not stand upon any large discourse, but as briefly as I can, give you the natures and cures. You shall then know,

The Nature of Goats.

that the Goat is a beast of a hot, strong, and lusty constitution, especially in the act of generation; that they exceed all other cattle, delight to live in mountains that be high, craggy, and full of bushes, bryars, and other wood, they will feed in any plain pastures, but their special delight is in brousing upon Trees, they are so nimble of foot that they will go in places of greatest danger. The profit which comes from them is their milk, which is an excellent restorative, and their Kids which are an excellent Venison. They are in other countries, as in *Spain*, the Islands of *Azores*, and the Islands of the *Canaries*, preserved for the chase and for hunting as we preserve our Dear both Red and Fallow, and make excellent pastime.

His shape.

For the shape of the Goat: he would have a large body, and well haired, great legs, upright joints, not bending, a neck plain and short, a head small and slender, large horns, and bending, a big eye, and a long beard, and his colour white, black, or pide. Some do use to shear them, to make rough mantles of: but it is not so with us in *England*. The she Goat would have large teats and a big udder, hanging ears and no horns, as they have in many places.

The ordering of Goats.

These Goats would be kept in small flocks, or herds, as not above

above a hundred in a herd. As they must in the heat of Summer have much shade, so in the Winter likewise much shelter: for they can neither endure extremity of heat nor cold, especially, the violence of winter, for that will make the she Goat cast her Kid, or bring it forth untimely. These love Mast well, but yet you must give them other food to mix with it. The best time to let the Male and Female go together, is about the beginning of *December*. If you house your Goats in the winter, let them have no Litter to lye on, but the floor paved, or gravelled, for otherwise their own heat will annoy them: they must also be kept very cleanly, for they can indure no filthy savours. For the young Kids, you shall in all parts order them as you do your Lambs.

Now for their preservation, if they be suffered to go and chuse their own food, they are to themselves so good Physicians, that they will seldome or never be troubled with any inward sickness; only the unnatural excess of their lust maketh them grow soon old, and so both past use and profit. For those particular diseases which accidentally fall upon them: here followeth the cures.

CHAP. II.

Of the Pestilence in Goats, or any inward and hidden sickness.

IF you perceive your Goats to droop, or look with sullen or sad countenances, it is an assured sign of sickness, but if they foam or Lather at the mouth, then it is a sign of the Pestilence. The cure is, first, to separate them from the sound, then to let them blood, and give them the Buds and Leaves of *Celandine*, with rushes and reeds to eat, and it is a present remedy. The Cure.

CHAP. III.

Of the Dropsie in Goats.

GOats are very much subject unto the Dropsie, through their excess of drinking water, the sign whereof is a great inflammation and heat in the skin: the cure is, to seeth Wormwood in Water and Salt, and give a pint thereof to a Goat to drink divers mornings, for to slit and let out the water under the shoulder, is not so certain and safe a cure. The Cure.

CHAP.

CHAP. IV.

Of stopping the Teats.

The Cure. THere will ingender in the teats of Goats, a certain tough hard flegm, which will stop the milk from issuing: which to cure, you shall with your finger and your thumb pull it away, and then anoint the place with hony, and the Goats milk mixt together.

CHAP. V.

Of Goats that cannot Kid.

GOats above all other cattle, are troubled with hardness in Kidding, by reason that if they be chased or hunted their Kids will turn in their bellies: the remedy then to preserve them from that danger, is to keep them quiet and untroubled, until they have Kidded.

CHAP. VI.

Of the Tetter, or dry Scab in Goats.

TO heal any Tetter, or dry scab in Goats, take *Black soape*, *Tar*, *Hogs-grease*, and *Brimstone*, mix them well together and anoint the sores therewith, and it will heal them.

CHAP. VII.

Of Gelding Kids in the Summer season.

KIds being Gelt in the Summer season, as those which are late kidded must necessarily be: the flye will be so busie with the sore, that with their blowings they will breed such store of Maggots in the wound, that it will indanger their lives: to defend them then from such annoyance of the flye, you shall take Soot, Tar, and thick Cream, and mix them well together, and anoint the wound therewith, and it will both heal it and keep the flye away.

CHAP. VIII.

Of the Itch in Goats.

IF your Goats be troubled with any Itch, so that they cannot feed for clawing or biting themselves, you shall wash their skins with old Chamber-lye, and green Copperas well boyled together, and it will kill the Itch.

CHAP.

CHAP. IX.

Of the Tuel stopping in Goats.

GOats, when they are sucking on their dams, or when they are new Kidded, will commonly have a great lax or squirt, so that the ordure which cometh from them, if it be not well clensed and taken from them, it will with their own natural heat so bake and dry, that it will stop up their Tuels, so that they cannot dung, which if it be not holpen, the Kid will dye. The cure is, to cleanse the place, and open the Tuel, and then put into it an inch or thereabout of a small Candles end dipt in hony, and then anoint all the Tuel over with Capons-grease. The Cure.

CHAP. X.

Of the Staggers, or reeling evil in Goats.

IF your Goats be troubled with the Staggers or Reeling evil, which is a disease bred in them by the violent heat of the Sun, you shall take *Bay-salt* and *Verjuce*, and mix them together, and give the Goat half a pint thereof to drink: or else take *House leek*, and *Dragons*, of each alike: so grounds of *Ale* with a little new *Milk*: stamp the herbs, and then mingle them together, then put thereto a few *geves* grosly beaten, and then boil it again, then cool it, and give the sick Goat three or four spoonfuls thereof to drink, and it will cure her. Now for any other infirmities which shall happen unto Goats, you may cure them with the same medicines which you cure sheep; for their natures do not much differ.

The end of the Goat.

Of Swine.

CHAP. I.

Of all manner of Swine, their natures, use, shapes, and preservations.

ALthough Swine are accounted troublesome, noysome, unruly, and greatly ravenous, as indeed their natures are not much differing from such qualities; yet the utility and profit of them, will easily wipe off those offences; for

for to speak truly of the Swine, he is the Husbandmans best Scavenger, and the Huswives most wholsome sink; for his food and living is by that which will else rot in the yard, make it beastly, and breed no good manure, or being cast down the ordinary sink in the house breeds noysome smells, corruption, and infection; for from the Husbandman he taketh pulse, chaff, barn dust, mans ordure, garbage, and the weeds of his yard: and from the huswife her draff, swillings, whey, washing of tubs, and such like, with which he will live and keep a good state of body, very sufficiently; and though he is accounted good in no place but the dish only, yet there he is so lovely and so wholsome, that all other faults may be born with, he is by nature greedy, given much to root up grounds and tear down fences; he is very lecherous and in that act tedious and bruitish: he is subject to much anger, and the fight of the Boars are exceeding mortal: they can by no means indure storms, winds, or foul weather, they are excellent observers of their own homes: and exceeding great lovers one of another: so that they will dye upon any beast that offendeth their fellows.

Of the choice and shape of Swine.

Now touching the choice of Swine, you shall understand that no Country in England breedeth naturally better Swine one than another: but if any have preheminence, then I must prefer *Leicestershire*, and some parts of *Northamptonshire*, and clay countries bordering on *Leicestershire*; and the reason I take to be, their great multiplicity of grain, especially beans and pulse. For the Mast countreys, though they are good feeders they are no large breeders, whence it comes that your wild swine is ever your least swine, but your sweetest Bacon. But if the Race and keeping be alike, the proportion and goodness will be alike; therefore in the choice of your Swine, chiefly the Boars and Sows which you breed of, let them be long and large of body, deep sided, and deep bellied, thick thighs, and short legs, for though the long-legged swine appear a goodly beast, yet he but confeneth the eye and is not so profitable to the Butcher, high claws, thick neck, a short and strong groin, and a good thick chine well-set with strong bristles: the colour is best which is all of one peece, as all white, or all sanded; the pide are the worst and most apt to take meazels; the black is tolerable, but our Kingdome through the coldness breedeth them seldome.

The

The use and profit of Swine is only (as the Husbandman saith) for the roof, which is bacon; for the spit, which is pork, sowse and pudding; and for breed, which is their pigs only. To have too many Sowes in a yard is not good; for their encrease and bringing forth is so great, that they will for want of food eat one another. A Sow will bring forth Pigs three times a year, namely, at the end of every ten weeks, and the number is great which they will bring forth: for I have known one Sowe have twenty Pigs at one litter; twelve, fourteen, and sixteen are very common; yet a Sow can bring up no more Pigs than she hath teats, therefore look how many she hath, and so many Pigs preserve of the best, the rest cast away or put to other Sowes which want, yet give suck. A Sow will bring Pigs from one year old, till she be seven years old. The Pigs which you rear, after you have chosen the best for Boars or Sowes to breed on, geld the rest both male and females: the males will make goodly hogs, which are excellent Bacon or Pork; and the females which are called splayd-guelts, will do the like, and breed a great deal more grease in their bodies, whence it comes, that the Husbandman esteems one splay'd-guelt before two hogs. Young shots which are Swine of three quarters, or but one year old, are the daintiest Pork. The use and profit of Swine.

Now for the preservation of Swine, it is contained in their government and food, and is all that belongeth to the office of the Swine-herd. The orderliest feeding of Swine is, (when you keep them, but in good state of body, and not seek to fat them) in the morning early when you unstie them, to give them draff, pulse, or other garbage, with swilling in their troughs, and when they have eaten it, to drive them to the field, where they may graze and root for their food: And of grounds the soft marish and moorish grounds are the best, where they may get the roots of Seedge, Reeds, Rushes, Knot-grass, and such like, which is wholsome for Swine, or the fallow or tythe-field, where they may root at pleasure, and by killing the weeds bring profit to the Earth, and at the fall of the leaf, it is good to drive them to hedges, where they may get Haws, Hips, Sloes, Crabs, or such fruit, which is also very wholesome: and the poor sort will gather their fruits, and keep them safe to feed their Swine with all the Winter. When evening cometh, you shall drive your Swine home, and

then filling their troughs with draff and ſwillings, let them fill their bellies, and then ſtie them up, ſo ſhall you keep them from doing other hurts and injuries. If once in a fortnight you mixe with your ſwillings ſome Radle or red Oaker, it will preſerve them wonderfully from meazels, and all inward infections: and thus much for the general diſcourſe of Swine; now I will proceed to their particular infirmities, and other buſineſſes.

CHAP. II.

Of the Feaver or any hidden ſickneſs in Swine.

THere is no Beaſt maketh his ſickneſs ſo apparent as the Swine; for when he findeth any grief or diſtemperature in his body, he preſently droopeth, forſakes his meat, and will not eat till he find in himſelf a perfect recovery: therefore when you ſhall ſo find him to forſake his meat, you ſhall firſt let him blood under his tayl, and under his ears; and if they bleed not freſhly enough, you ſhall beat them with a ſmall ſtick, and that will bring forth the blood; then wrap about the wounds the bark of a young Oſier, and then keep him warm, and give him to drink warm ſwillings, well mixt with barley meal, and red Oaker.

The Cure.

CHAP. III.

Of the Murren, Peſtilence, or Cather in Swine.

THeſe diſeaſes being all of one nature, are very much incident in Swine, and ſpring from many grounds, as from corruption in blood, ingendred by the eating of rotten fruit, or too much Butchers garbage, and many times by eating too rank graſs, wherein is much *Hemlock*: their particular ſigns are moyſt eyes, and their heads born on each ſide, but their general knowledge is their faſting and mortality. The Cure is, to give them in warm wath, *Hens dung*, and boyl'd *Liverwort*, with a little *Red Oaker*.

The Cure.

CHAP. IV.

Of the Gall in Swine.

SWine will have an overflowing of the Gall, becauſe choler is much powerful in them, which you ſhall know by a ſwelling which will riſe under their jaws; and the Cure is, to ſtamp *Gallwort* or *Saffron*, and mix it with honey and water, and then ſtraining

The Cure.

ing it, give it the Swine to drink by a pint at a time.

CHAP. V.

Of the Meazels in Swine.

THis diſeaſe of all other is moſt common in Swine, and with eaſe helped; as thus: you ſhall take the oldeſt Urine you can get, and mix it with red Oaker till it be thick, and about the quantity of an Ale-quart, then mix it with a gallon of warm ſweet Whey, and give it the Swine to drink, after he hath been kept all night faſting.

CHAP. VI.

Of Impoſthumes in any part of a Swine.

SWine will have Impoſthumes in any part of their bodies, as under their throats, their ears, bellies, and oft upon their ſides. The Cure is, if they be ſoft, to lance them, and let out the matter, and then heal them with Tarre and Butter; but if they be not ſoft, then let the Swine bloud under the tongue, and rub all his mouth, chaps and groin, with Wheat-meal and ſalt, and the Impoſthume will go away.

CHAP. VII.

Of Vomiting in Swine.

IF your Swine do vomit and caſt up his meat, you ſhall give him ſpelted Beans to eat, and they will ſtrengthen his ſtomach.

CHAP. VIII.

Of leanneſs, miſlike, ſcurf and mangineſs in Swine.

THeſe diſeaſes proceed from corruption of blood, ingendred by lying wet in their ſties, having filthy rotten litter, or much ſcarcity of meat. The Cure is, firſt to let the Swine blood under the tail, then to take a Wool-card, and to comb off all the ſcurfe and filth from the Swines-back, even till his skin bleed: Then take *Tarre*, *Hogs-greaſe* and *Brimſtone*, and mixing them well together, anoint the Swine therewith, then let the ſtye be mended, his litter be ſweet, and give him good warm food, and the Swine will be fat and ſound very ſuddenly. The Cure.

CHAP. IX.

Of the Sleeping Evil in Swine.

SWine are much subject to this disease in the Summer time, and you shall know it by their continual sleeping, and neglecting to eat their meat: The cure is, to house them up, and keep them fasting twenty four hours, then in the morning when hunger pincheth them, to give them to drink water, in which is stampt good store of *Stonecrop*, which as soon as they have drunk, they will vomit and cast, and that is a present remedy.

The Cure.

CHAP. X.

Of pain in the Milt.

SWine are oft troubled with pain in their Milts, or Spleens, which proceedeth from the eating of Mast, when they are first put thereunto, through their over-greedy eating thereof, and is known by a Reeling, going of one side. The cure is, to give them the juyce of Wormwood in a little honied water, to drink, and it will assuage the pain.

The Cure.

CHAP. XI.

Of the unnaturalness of Sowes.

MAny Sows do prove so unnatural, that they will devour their Pigs when they have farrow'd them; which springeth from an unnatural greediness in them; which to help, you must watch her when she farroweth, and take away the Pigs as they fall, then take the wreckling, or worst pig, and anoint it all over with the juyce of *Stonecrop*, and so give it the Sow again: and if she devour it, it will make her cast and vomit so extreamly, that the pain of her Surfeit will make her loath to do the like again. But of all Cures, the best for such an unnatural Beast, is to feed her well, and then kill her.

CHAP. XII.

Of the Laxe or Fluxe in Hogs.

FOr the Laxe or Fluxe in Swine, you shall give them Verjuyce and milk mixt together to drink, and then feed them with food, as spelted Beans, Acorns, or Acorn-husks. This is also excellent, and approved for young Pigs and Shots, when they have any scouring.

CHAP.

CHAP. XIII.

Of the lugging of Swine with Dogs.

IF your Swine be extreamly lugged and bitten with dogs, to prevent the rankling, and impoſthumation of the ſore, you ſhall anoint it with vinegar, ſope, and tallow mixt together, and it will cure the ſame.

CHAP. XIV.

Of the Pox in Swine.

THe Pox is a filthy and infectious diſeaſe in Swine, proceeding from corrupt blood, ingendered by poverty, wet lying, lowſineſs, and ſuch like, and the Swine can never proſper which hath them. The Cure is, to give him firſt to drink two ſpoonfuls of *London Treacle*, in a pint of *honied water*, which will expel the infection outwardly, then to anoint the ſores with *Brimſtone* and *Boars-greaſe* mixt together, and ſo ſeparate the ſick from the ſound. The Cure.

CHAP. XV.

Of killing Maggots in the Ears or other parts of Swine.

IF Maggots ſhall breed in the Ears of your Swine, which have been lugged with dogs for want of good looking unto, as often it happeneth: you ſhall take either the ſweeteſt wort you can get, or elſe honey, and anoint the ſores therewith, and the Maggots preſently will fall off and die.

CHAP. XVI.

Of feeding Swine exceeding fat, either for Bacon or for Lard.

DIvers men according to the nature of divers Countries, have divers wayes in feeding of their Swine, as thoſe which live near unto Woods and places where ſtore of Maſt is, turn their Swine unto the Maſt for ſix or eight weeks, and then having got fleſh and fatneſs on their backs do bring them home, and put them up in ſties, and then feed them for ten dayes or a fortnight after, with old dry peaſe, given them oft in the day, a little at once, with water as much as they will drink: for this will harden the fleſh and fat, ſo that it will not conſume when it comes to boyling; this manner of feeding is good, and not to be diſliked. The feeding of Swine in Wood Countries.

Now

The feeding of Swine in Champion Countries.

Now the feeding of Swine in Champion Countries, which are far from Woods, is in this manner: First, you shall stie up those Swine which you intend to feed, and let them not come out of the same untill they be fed, but have their food and water brought unto them: Now the first two dayes you shall give them nothing; the third day you shall early in the morning give them a pretty quantity of dry pease or beans; at noon you shall give them as much more, at four of the clock as much more, and when you go to bed as much more, but all that day no water. The next day you shall feed them again at the same hours, and set water by them, that they may drink at their own pleasure, and twice or thrice a week as your provision will serve you, it is good to fill their bellies with sweet Whey, Butter-milk, or warm Wash, but by no means scant the proportion of their Pease; and by thus doing you shall feed a Swine fat enough for the slaughter in four or five Weeks.

Of feeding at the Reek.

There be other Husband-men in Champion Countries, as in *Leicestershire*, and such like, that put their Swine to Pease Reeks, or Stacks, set in the field near unto water-furrowes or rundles, so that they may let the water into the stack yard, and then morning and evening cut a cutting of the Stack or Reek, and spread the reaps amongst the Swine: This manner of feeding is best for small Porkets, and will fat them very reasonable in three weeks or a moneth. If you feed sheep amongst your Porks, it is very good, and daily by many practised; for by that means you shall not lose any of your grain; for what your sheep cannot gather up, your porkets will.

Of feeding of Swine in or about great Cities.

Now for such as live in or near about great Cities or Towns, as *London*, *York*, or such like, and have neither great store of Mast, nor great store of grain; yet they have a manner of feeding as good, and somewhat more speedier then any of the other, only the Bacon is not so sweet or toothsome; and thus it is, They stie up their fatlings, as is before said, and then take Chandlers grains, which is the dregs and offall of rendred Tallow, as hard skins, kels, and fleshy lumps, which will not melt together with other course skins of the Tallow, Suet, or Kitchin fee, and mixing it in warm Mash, give it the Swine to eat three or four times in the day, and it will suddenly puff him up with fatness, then bestow

of

of every Swine a bushel of dry peaſe to harden his fleſh, and you may kill them at your pleaſure. The only danger of this food is, it will at firſt ſometimes make Swine ſcour; eſpecially young pigs if they eat it: but as ſoon as you perceive ſuch a fault, give unto your elder Swine milk and verjuyce, and to your ſucking pigs verjuyce only.

Now laſtly, the beſt feeding of a Swine for lard, or a Boar for brawn, is to feed them the firſt week with Barley ſodden till it break, and ſod in ſuch quantity that it may ever be given ſweet; then after to feed them with raw malt from the floor, before it be dryed, till they be fat enough: and then for a week after, to give them dry peaſe or beans to harden their fleſh. Let their drink be the waſhing of Hogſheads, and Ale-barrels, of ſweet Whey, and let them have ſtore thereof. This manner of feeding breeds the whiteſt, fatteſt, and beſt fleſh that may be, as hath been approved by the beſt husbands. Of feeding of Hogs for lard, or Boars for brawn.

The end of the Swine of all ſorts.

Of Conies.

CHAP. I.

Of the tame rich Coney, his nature, choice, profit, and preſervation.

ALL ſorts of Conies may as well be kept tame as wild, and do above other Beaſts delight in impriſonment and ſolitarineſs, which proceedeth from the ſtrength of melancholy in their nature, being creatures ſo much participating of the earth, that their delight is to live in holes, rocks, & other dark Caverns. They are violently hot in the act of generation, and perform it with ſuch vigor and exceſs, that they ſwoon and lye in trances a good The nature of the Coney.

good ſpace after the deed is done. The males are given to much cruelty, and would kill the young rabbets if he could come to them: whence it proceedeth, that the females after they have kindled, hide their young ones, and cloſe up the holes, ſo that the buck-cony may not find them. The female or Doe conies are wonderfull in their increaſe, and bring forth young ones every moneth: therefore when you keep them tame in boxes, you muſt obſerve to watch them, and as ſoon as they have kindled, to put them to the Buck, or otherwiſe they will mourn, and hardly bring up their young ones.

Of Boxes for tame Conies.

The Boxes in which you ſhall keep your tame Conies, would be made of thin Wainſcot boards, ſome two foot ſquare, and one foot high; and that ſquare muſt be divided into two rooms, a greater room with open Windowes of wire, through which the Coney may feed; and a leſſer room without light, in which the Coney may lodge and kindle, and before them both a trough in which you may put meat, and other neceſſaries for the Coney, and thus you may make box upon box in divers ſtories, keeping your Bucks by themſelves, and your Does by themſelves, except it be ſuch Does as have not bred, and then you may let a Buck lodge with them; alſo when your Doe hath kindled one neſt, and then kindleth another, you ſhall take the firſt from her and put them together in a ſeveral box, amongſt rabits of their own age, provided that the box be not peſtred, but that they have eaſe and liberty.

Of the choice of rich Conies.

Now for the choice of theſe tame rich Conies you ſhall not as in other cattel, look to their ſhape, but to their richneſs, only elect your Bucks, by the largeſt and goodlieſt Conies you can get: and for the richneſs of the skin, that is accounted the richeſt, which hath the equalleſt mixture of black and white hair together, yet the black rather ſhadowing the white, then white any thing at all over-maſtering the black, for a black skin with a few ſilver hairs is much richer than a white skin with a few black hairs: But as I ſaid before, to have them equally or indifferently mixt, is the beſt of all other: the Fur would be thick, deep, ſmooth and ſhining, and a black coat without ſilver hairs, though it be not reckoned a rich coat, yet it is to be preferred before a white, a pyed, a yellow, a dun, or gray.

Now

Now for the profit of these rich Conies, (for unless they did far away and many degrees exceed the profit of all other conies they were not worthy the charge which must be bestowed upon them) it is this; First, every one of the rich conies which are killed in season as from *Martilmas* untill after *Candlemas*, is worth any five other Conies, for they are of body much fatter and larger, and when another skin is worth two pence or three pence at the most, they are worth two shillings, or two shillings and sixepence. Again, they encrease oftner, and bring forth more Rabbets at one kindling then any wild Cony doth: they are ever ready at hand for the dish, Winter and Summer, without charge of Nets, Ferrets, or other Engines, and give their bodies gratis, for their skins will ever pay their Masters charge with a most large interest.

Of the feeding and preservation of Conies.

Now for the feeding and preservation of these rich Conies, it is nothing so costly or troublesome as many have imagined, and as some ignorant in the skill of keeping them, have made the World think: for the best food you can feed a Cony with, is the the sweetest, shortest, softest, and best hay you can get, of which one load will serve two hundred couples a year, and out of the stock of two hundred, you may spend in your house two hundred, and sell in the market two hundred more, yet maintain the stock good, to answer every ordinary casualty. This hay in little cloven sticks might with ease reach it and pull it out of the same, yet so as they may not scatter nor waste any. In the Troughs under their boxes, you shall put sweet Oats and their water, and this should be their ordinary and constant food wherewith you shall feed your Conies, for all other should be used but Physically, as for the preservation of their health: as thus you shall do twice or thrice in a fortnight for the cooling of their bodies, give them Greens, as Mallows, Claver-grass, Sower-docks, blades of Corn, Cabbage or Colwort leaves, and such like, all which cooleth and nourisheth exceedingly: some use to give them sometimes sweet grains, but that must be used seldom, for nothing sooner rotteth a Cony.

You must also have great care that when you cut any grasse for them that are weeds, that there grow no young Hemlock amongst it, for though they will eat it with great greediness, yet it

is a preſent poyſon, and kills ſuddainly, you muſt alſo have an eſpecial care every day to make their boxes ſweet and clean, for the ſtrong ſavour of their ordure and piſs is ſo violent, that it will both annoy themſelves, and thoſe which ſhall be frequent amongſt them.

Of the Rot in Conies.

Now for the infirmities which are incident unto them, they are but two: The firſt is rottenneſs, which cometh by giving them too much green meat, or gathering their greens and giving it them with the dew on: therefore let them have it but ſeldome, and then the dryneſs of the Hay will ever drink up the moyſture, knit them and keep them ſound without danger.

Of madneſs in Conies.

The next is a certain rage of madneſs, ingendred by corrupt bloud, ſpringing from the rankneſs of their keeping; and you ſhall know it by their wallowing and tumbling with their heels upward, and leaping in their boxes. The Cure is, to give them *Harelhiſtle* to eat, and it will heal them. And thus much of the tame rich Coney, and his properties.

The end of the Four-footed Beaſts.

The Second Book.

Of Poultrey.

CHAP. I.

Containing the ordering, fatting, cramming, and curing of all infirmities of Poultry, as Cocks, Hens, Chickens, Capons, Geeſe, Turkies, Pheaſants, Partridges, Quails, Houſe-doves, and all ſorts of Fowl whatſoever. And firſt of the Dunghill Cock, Hen, Chicken, and Capon.

SOme ſmall thing hath been written of this nature before, but ſo drawn from the Opinions of old Writers, as *Italians*, *French*, *Dutch*, and ſuch like, that it hath no coherence or congruity with the practice and experience of Engliſh Cuſtoms, both

both their Rules and Climes being so different from ours, that except we were to live in their Countries, the Rules which are printed are useless, and to no purpose. To let pass then the opinion of strangers, and come to our own home-bred knowledg which is so mixed with all profitable experiments, that it needeth not the help of other Nations so much, as men would make us believe.

Of the Choice and shape of the Cock.

You shall understand that the Dunghill Cock (for the fighting Cock deserveth a much larger and particular discourse) is a foul of all other birds the most manliest, stately, and majestical, very tame and familiar with the man, and naturally inclined to live and prosper in habitable Houses: he is hot and strong in the act of generation, and will serve ten Hens sufficiently: and some twelve and thirteen: he delighteth in open and liberal plains, where he may lead forth his Hens into green pastures and under hedges, where they may warm and bath themselves in the Sun; for to be pent up in walled places, or in paved Courts, is most unnatural unto them, neither will they prosper therein.

Now of the choyce and shape of the Dunghill Cock, he would be of large and well-sized body, long from the head to the Rump, and thick in the garth; his neck would be long, loose, and curiously bending it and his body together, being straight and high up erected, as the Faulcon and other birds of prey are; his comb, wattles and throat would be large, of great compass, ragged, and very Scarlet red, his eyes round and great, the colour answering the colour of his plume or male, as gray with gray, red with red, or yellow with yellow, his bill will be crooked, sharp and strongly set on to his head, the colour being suitable with the colour of feathers on his head, his main or neck feathers would be very long, bright, and shining, covering from his head to his shoulders, his legs straight and of a strong beam, with large long spurs, sharp and a little bending, and the colour black, yellow or brownish, his claws short, strong, and well wrinkled, his tayl long, and covering his body very closely, and for the general colour of the Dunghill Cock it would be red, for that is medicinal, and oft used in cullifs and restoratives. This Cock should be valiant within his own walk, and if he be a little Knavish, he is so much the better; he would be oft crowing and busie in scatching the earth to find out Worms and other food for his Hens.

Of the Hen her choyce and shape.

Now for the Hen, if she be a good one, she should not differ much from the nature of the Cock, but be valiant, vigilant and laborious both for her self and her Chickens. In shape the biggest and largest are the best, every proportion answering those before described of the Cock, only instead of her comb she should have upon her crown a high thick tuft of feathers: to have many and strong claws is good, but to want hinder claws is better, for they oft break the egs, and such Hens sometimes prove unnatural, it is not good to choose a crowing Hen, for they are neither good breeders nor good layers. If you choose Hens to sit, choose the elder, for they be constant, and will sit out their times; and if you will choose Hens to lay, choose the youngest; for they are lusty and prone to the act of ingendring, but for neither purpose choose a fat Hen, for if you set her, she will forsake her nest, and if you keep her to lay, she will lay her eggs without shells. Besides, a fat Hen will waxe sloathful, and neither delight in the one, nor in the other Act of Nature; such Hens then are fittest for the dish then the Hen-house.

Of Setting Hens.

The best time to set Hens to have the best, largest, and most kindly Chickens, is in *February*, in the increase of the Moon, so that she may hatch or disclose her Chickens in the increase of the next new Moon, being in *March*; for one brood of *March* Chickens is worth three broods of any other: you may set Hens from *March* till *October*, and have good Chickens, but not after by any means, for the Winter is a great enemy to their breeding: A Hen doth sit twenty one dayes just, and then hatcheth, but Pea-hens, Turkies, Geese, Ducks, and other Water-foul sit thirty: so that if you set your Hen as you may do upon any of their Egs, you must set her upon them nine dayes before you set her upon her own. A Hen will cover nineteen Eggs well, and that is the most in true rule, she should cover, but upon what number soever you set her, let it be odd, for the Eggs will lye round, close, and in even proportion together; it is good when you lay your eggs first under your Hens, to mark the upper side of them, and then to watch the Hen, to see if she busie her self to turn them from the one side to the other, which if you find she doth not, then when she riseth from her eggs to feed or bath her self, you must supply that office, and turn every egg it self, and esteem your hen

of

of so much the less reckoning for the use of breeding: be sure that the Eggs which you lay under her, be new and sound, which you may know by their heavines, fulnes, and clearnes, if you hold them up betwixt the Sun and your eye-sight; you must by no means at any time raise your Hen from her nest, for that will make her utterly forsake it.

Choyce of Eggs.

Now for helping a Hen to hatch her eggs, or doing that which should be her office, it is unnecessary, and shall be much better to be forborn then any way used; or to make doubt of bringing forth, or to think the Hen sitteth too long, as many curious House-wifes do, if you be sure you set her upon sound Eggs, is as frivolous: but if you set her upon unsound Eggs; then blame your self both of the los and injury done unto the Hen in her los of labour.

A Hen will be a good sitter from the second year of her laying to the fifth, but hardly any longer; you shall observe ever when your Hen riseth from her nest, to have meat and water ready for her; lest straying too far to seek her food, she let her eggs cool too much, which is very hurtful. In her absence you shall stir up the straw of her nest, and make it soft and handsome, and lay the eggs in order as she left them: do not in the election of your Eggs choose those which are monstrous great, for they many time have two yelks; and though some write, That such Eggs will bring out two Chickens, yet they are deceived; for if they bring forth two, they are commonly most abortive and monstrous: to perfume the nest with brimstone is good, but with Rosemary much better. To set Hens in the Winter-time in Stows or Ovens is of no use with us in *England*, and though they may by that means bring forth, yet will the Chickens be never good nor profitable, but like the planting of Lemons and Pomegranate-trees, the fruits will come a great deal short of the charges. When your Hen at any time is absent from her nest, you must have great care to see that the Cock come not to sit upon the Eggs, (as he will offer to do) for he will indanger to break them, and make her love her Nest worse.

Of Chickens.

As soon as your Chickens be hatcht, if any be weaker then the other, you shall rap them in Wool, and let them have the ayr of the fire, and it will strengthen them: to perfume them with a lit-

tle

tle Rosemary is very wholsome also; and thus you may in a sieve keep the first hatcht Chickens till the rest be disclosed, (for Chickens would have no meat for two dayes) and some shells being harder than other, they will take so much distance of time in opening; yet unless the Chickens be weak, or the Hen rude, it is not amiss to let them alone under her, for she will nourish them most kindly: after two dayes is past, the first meat you give them should be very small Oatmeal, some dry, and some steept in milk, or else fine wheat bread crums, and after they have got strength, then Curds, Cheese-parings, white-bread crust soak'd in Milk or Drink, Barly meal, or Wheat bread scalded, or any such like soft meat that is small, and will easily be divided. It is good to keep Chickens one fortnight in the house, and after to suffer them to go abroad with the Hen to Worm, for that is very wholsome to chop green Chives amongst your Chickens meat, will preserve them from the Rye, and other diseases in the head; neither must you at any time let your chickens want water, for if they be forced to drink in puddle, it will breed the Pip: also to feed upon Tares, Darnel, or Cockel, is very dangerous for young chickens.

Of feeding and cramming Chickens.

You may by these foods aforesaid, feed chickens very fat under their dams: but if you will have fat crammed chickens, you shall coop them up when the Dam forsaketh them, and the best crams for them is wheat-meal and milk, made into dough, and then the crams steeped in milk, and so thrust down their throats: but in any case let the crams be small, and well wet for choaking; fourteen dayes will feed a Chicken sufficiently: And thus much briefly for your breed.

Of preserving Eggs.

Now because egs of themselves are a singular profit, you shall understand, that the best way to preserve or keep them long, is, as some think, to lay them in good straw, and cover them close, but that is too cold, and besides will make them musty: others will lay them in bran, but that is too hot, and will make them putrifie; and others will lay them in salt, but that makes them waste and diminish: the best way then to keep them most sweet, most sound, and most full, is only to keep them in a heap of old Malt, close and well covered all over.

Of gathering Eggs.

You shall gather your eggs up once a day, and leave in the nest but the nest-egg, and no more; and that would ever be in the after-

after-noon, when you have seen every Hen come from her nest severally: some Hens will by their cackling tell you when they have laid, but some will lay mute; therefore you must let your own eye be your instructor.

Now touching the Capon, which is the gueld Cock-chicken, you shall understand, that the best time to carve or gueld, is as soon as the Dam hath left them, if the stones be come down, or else as soon as they begin to crow: for the art of carving it self, it is both easie and common, and much sooner to be learned by seeing one carved, then by any demonstration in writing. Of the Capon when to carve him.

These Capons are of two uses: The one is to lead Chickens, Ducklings, young Turkies, Pea-hens, Phesants and Partridges, which he will do altogether, both naturally and kindly, and through largeness of his body, will brood or cover easily thirty or five and thirty; he will lead them forth so safely, and defend them against Kites or Buzzards, more and better then the Hens: therefore the way to make him to take unto them is, with a fine small briar, or else sharp nettles at night, to beat and sting all his breast and neather parts, and then in the dark to seat the Chickens under him, whose warmth taketh away his smart; he will fall much in love with them, and whensoever he proveth unkind, you must sting, or beat him again, and this will make him never forsake them. A Capon to lead Chickens.

The other use of Capons is, to feed for the dish, as either at the Barn door, with craps of corn, and the chavings of pulse, or else in pens in the house, by cramming them, which is the most dainty: the best way then to cram a Capon, (setting all strange inventions apart) is to take Barley meal reasonably sifted, and mixing it with new milk, make it into a good stiff dough; then make it into long crams, biggest in the midst, and small at both ends, and then wetting them in luke-warm milk, give the Capon a full gorge thereof three times a day, morning, noon, and night, and he will in a fortnight or three weeks, be as fat as any man need to eat. Of feeding or cramming Capons.

As for mixing their crams with sweet Wort, Hogs grease, or Sallet oyl, they are by experience found to breed loath in the Birds, and not to feed at all: only keep this observation, not to give your Capon new meat untill the first be put over. And if you

you find your Capon ſomething hard of digeſtion, then you ſhall ſift your meal finer, for the finer your meal is, the ſooner it will paſs through their bodies. And thus much for the Capon. Now for their infirmities, they follow in order.

CHAP. II.

Of the Pip in the Poultry.

THe Pip is a white thin ſcale, growing on the tip of the tongue, and will make Poultry that they cannot feed: it is eaſie to be diſcerned, and proceedeth generally from drinking puddle water, from want of water, or from eating filthy meat. The Cure is to pull off the ſcale with your nayl, and then rub the tongue with ſalt.

The Cure.

CHAP. III.

Of the Roup in Poultry.

THe Roup is a filthy byle or ſwelling on the Rump of Poultry, and will corrupt the whole body. It is ordinarily known by the ſtaring and turning backward of the feathers: The Cure is, to pull away the feathers, and open the ſore, to thruſt out the core, and then waſh the place with ſalt and water, or with brine, and it helpeth.

The Cure.

CHAP. IV.

Of the Flux in Poultry.

THe Flux in Poultry cometh with eating too much moyſt meat. The Cure is, to give them peaſe bran ſcalded, and it will ſtay them.

The Cure.

CHAP. V.

Of ſtopping in the Belly.

STopping in the Bellies of Poultry, is contrary to the Flux, ſo that they cannot mute: therefore you ſhall anoint their Vents, and then give them either ſmall bits of bread, or Corn ſteept in mans Urine.

CHAP. VI.

Of Lice in Poultry.

IF your Poultry be much troubled with Lice, as it is a common infirmity

infirmity, proceeding from corrupt food or want of bathing in ſand, aſhes, or ſuch like: you ſhall take Pepper ſmall beaten, and mixing it with warm water, waſh your Poultry therein, and it will kill all ſorts of vermine.

CHAP. VII.

Of ſtinging with venemous Worms.

IF your Poultry be ſtung with any venemous thing, as you may perceive by their lowring, and ſwelling, you ſhall then anoint them with Rew and Butter mixt together, and it helpeth.

CHAP. VIII.

Of ſore eyes in Poultry.

IF your Poultry have ſore eyes, you ſhall take a leafe or two of ground-Ivy, and chawing it well in your mouth, ſuck out the juice, and ſpit into the ſore eye, and it will moſt aſſuredly heal it, as it hath been often tried.

CHAP. IX.

Of Hens that crow.

IF your Hens crow, which is an ill ſign and unnatural, you ſhall pull their wings, and give her to eat either Barley ſcorched, or ſmall wheat, and keep her cloſe from other Poultry.

CHAP. X.

Of Hens that eat their Eggs.

IF your Hen will eat her Eggs, you ſhall only lay for her neſt-egg a piece of chalk cut like an egg, at which by pecking and loſing her labour, ſhe will refrain the evil.

CHAP. XI.

Of keeping a Hen from ſitting.

IF you would not have your Hen ſit, you ſhall bathe her oft in cold water, and thruſt a ſmall feather through her noſtrils.

CHAP. XII.

Of making Hens lay ſoon and oft.

IF you feed your Hens often with toaſts taken out of Ale, with Barley boild, or ſpelted fitches, they will lay ſoon, oft, and all the winter.

CHAP. XIII.

Of making Hens lean.

BEcause fat Hens commonly either lay their Eggs without shels, or at the best hand lay very small eggs; to keep them lean and in good plight for laying, you shall mix both their meat and water with the powder of tile-sheards, chalk or else tares, twice or thrice a week.

CHAP. XIV.

Of the Crow-trodden.

IF your Hen be trodden with a carrion Crow, or Rook, as oft they are, it is mortal and incurable, and you shall know it by the staring up of her feathers, and hanging of her wings, there is no way with her then, but presently to kill her.

CHAP. XV.

Of the Hen-house, and situation.

NOw for as much as no Poultry can be kept either in health or safety abroad, but must of force be housed, you shall understand that your Hen-house would be large and spacious, with somewhat a high roof, the walls strong, both to keep out theeves and vermine, the windows upon the Sun-rising, strongly lathed, and close shuts inward, round about the inside of the walls; upon the ground would be built large pens of three foot high for Geese, Ducks, and great fowl to sit in; near to the eavings of the house would be long Pearches, reaching from one side of the house to the other, on which should sit your Cocks, Hens, Capons, and Turkies, each on several Pearches, as they are disposed: at another side of the house, in that part which is darkest over the ground-pens, would be fixed hampers full of straw for nests, in which your Hens shall lay their eggs, but when they sit to bring forth chickens, then let them sit on the ground, for otherwise it is dangerous: let there be pins stricken into the wall, so that your Poultry may clime to their Pearches with ease: let the floor by no means be paved, but of earth smooth and easie, let the smaller fowl have a hole at one end of the house, made to come in and out at, when they please, or else they will seek roost in other places; and for the greater Fowl the door may be opened evening and morning. This house should be placed either

either near some Kitchin, Brew-house, or else some Kiln, where it may have air of the fire, and be perfumed with smoak, which to Pullen is delightful and wholsome. And thus much of the Cock, Hen, Capon, and Chicken.

CHAP. XVI.

Of Geese, their nature, choice, and how to breed them.

GEese, are a Fowl of great profit many waies, as first for food, next for their feathers, and lastly for their grease. They are held of Husbandmen to be fowl of two lives, because they live both on land and water; and therefore all men must understand that except he have either Ponds or Stream, he can never keep Geese well. They are so watchful and careful over themselves, that they will prevent most dangers: grass also they must necessarily have, and the worst, and that which is the most useless is the best, as that which is mooriſh, rotten, and unsavory, for cattel. To good grass they are a great enemy, for their dung and treading will putrifie it, and make it then barren.

Now for the choice of Geese, the largest is the best, and the colour would be white or gray, all of one pair, for pide are not so profitable, and black are worse: your Gander would be knaviſh and hardy, for hee will defend the Goslings the better. The choice of Geese.

Now for the laying of Eggs, a Goose beginneth to lay in the Spring, and she that layeth earliest is ever the best Goose, for she may have a second hatch. Geese will lay twelve, and some sixteen Eggs, some will lay more, but it is seldome, and they cannot be all well covered; you shall know when your Goose will lay, by her carrying straw up and down in her mouth, and scattering it abroad: and you shall know when she will sit, by her continuing on the nest till after she hath laid. You must set a Goose upon her own Eggs, for she will hardly or unkindly sit on another Goose Egs, as some imagine; but it is not ever certain: you shall in her straw when you set her, mix nettle roots, for it is good for the Goslings: thirty daies is the full time that a Goose sitteth, but if the weather be fair and warm, she will hatch three or four daies sooner; ever when the Goose riseth from the Nest, you Of laying egs, and sitting.

The ordering of Goslings.

shall give her meat, as skegge Oats, and Bran scalded, and give her leave to bathe in the water. After she hath hatcht her Goslings, you shall keep them in the house ten or twelve daies, and feed them with Curds, scalded Chippings, or Barly meal in milk knodden and broken, also ground Malt is exceeding good, or any Bran that is scalded in water, milk, or tappings of drink. After they have got a little strength, you may let them go abroad with a Keeper five or six hours in a day, and let the dam at her leisure intice them in the water; then bring them in, and put them up, and thus order them, till they be able to defend themselves from vermine. After a Gosling is a month or six weeks old, you may put it up to feed for a green-Goose, and it will be perfectly fed in another month following: and to feed them, there is no meat better than skeg Oats boil'd, and given plenty thereof thrice a day, Morning, Noon, and Night, with good store of milk, or milk and water mixt together to drink.

Of green-geese and their fatting.

Of the Gander.

Now you shall understand one Gander will serve well five Geese, and to have not above forty Geese in a flock is best, for to have more is both hurtful and troublesome.

Fatting of elder Geese.

Now for the fatting of elder Geese, which are those which are five or six months old, you shall understand that after they have been in the stubble fields, and during the time of Harvest got into good flesh, you shall then chuse out such Geese as you would feed, and put them in several pens which are close and dark, and there feed them thrice a day with good store of Oats, or spelted Beans, and give them to drink water and Barley-meal mixt together, which must evermore stand before them, this will in three weeks feed a Goose so fat as is needful.

Of gathering Geese feathers.

Now lastly, for the gathering of a Gooses feathers, you shall understand, that howsoever some Writers advise you for a needless profit to pull your Geese twice a year, *March* and *August*: yet certainly it is very nought and ill; for first, by disabling the flight of the Goose, you make her subject to the cruelty of the Fox, and other ravenous beasts: and by uncloathing her in Winter you strike that cold into her body which kills her very suddenly: therefore it is best to stay till moulting time, or till you kill her, and then you may imploy all her feathers at your pleasure, either for beds, Fletchers, or Scriveners.

For

For the diseases and infirmities in Geese, the most and worst they are subject unto, is the *Gargil*, which is a mortal or deadly stopping of the head. And the ordinary and certain cure is, to take three or four cloves of Garlick, and beating them in a mortar with sweet butter, make little long balls thereof, and give two or three of them to the Goose fasting, and then shut her up for two hours after. Of the Gargil in Geese. The Cure.

CHAP. XVII.

Of Turkies, their nature, use, increase and breeding.

Turkies, howsoever by some Writers they are held devourers of Corn, strayers abroad, ever pulling for meat, and many such like fained troubles, as if they were utterly unprofitable, yet it's certain, they are most delicate, either in past, or from the spit, and being fat, far exeeding any other house-fowl whatsoever: nay, they are kept with more ease and less cost, for they will take more pains for their food than any other Bird, only they are enemies to a Garden, and from thence must ever be kept. They when they are young are very tender to bring up, both because they are of a straying nature in themselves, and the Dams are so negligent, that whilst she hath one following her, she never respecteth the rest: therefore they must have a vigilant keeper to attend them, till they can shift for themselves, and then they will flock together, and seldome be parted. Till you fat them, you need not take care for food for them; they love to roost in trees or other high places.

Now for your choice of such as you would breed on; your Turky Cock would not be above two years old at most, be sure that he be loving to the Chickens; and for your Hen, she will lay till she be five year old, and upward. Your Turky Cock would be a Bird large, stout, proud and majestical, for when he walketh dejected, he is never good treader. Of the choice of the Turky Cock.

The Turky Hen, if she be not prevented, will lay her egges in secret places, therefore you must watch her, and bring her to her Hen-house; and there compel her to lay. They begin to lay in March, and will sit in April; and eleven Eggs, or thirteen, is the most they should cover: they hatch ever between five and twenty and thirty daies. When they have hatcht their broods be sure Of the Turky Hen her sitting

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to keep the Chicks warm, for the least cold kills them, and feed them either with Curds, or green fresh Cheese cut in small pieces; let their drink be new milk, or milk and water: you must be careful to feed them oft; for the Turky-Hen will not like the House-Hen, call her chickens to feed them. When your Chicks have got strength, you shall feed them abroad in some close walled Grass-plat, where they cannot stray, or else ever be at charge of a Keeper. The dew is most hurtful unto them, therefore you must house them at night, and let them abroad after Sun rise in the morning.

Of feeding Turkies.

Now for the fatting of Turkies, sodden Barly is excellent, or sodden Oats for the first fortnight, and then for another fortnight cram them in all sorts, as you cram your Capon, and they will be fat beyond measure. Now for their infirmities, when they are at liberty, they are so good Physitians for themselves, that they will never trouble their owners; but being coopt up, you must cure them as is before described for Pullen. Their Eggs are exceeding wholsome to eat, and restore nature decayed wonderfully.

CHAP. XVIII.

Of the Duck, and such Water Fowls.

THe tame Duck is an exceeding necessary fowl for the Husbandmans yard, for she asketh no charge in keeping, but liveth of corn lost or other things of less profit. She is once in a year a very great layer of Eggs; and when she sitteth she craves both attendance and feeding; for being restrained from seeking her food, she must be helped with a little barley or other overchaving of corn, such as else you would give unto Swine: as for her sitting, hatching, and feeding of her Ducklings it is in all points to be observed in such manner as you did before with the Goose, only after they are abroad they will shift better for their food than Goslings will. For the fatting of Ducks or Ducklings, you may do it in three weeks, by giving them any kind of Pulse or Grain, and good store of water.

Of wild-Duck, and their ordering.

If you will preserve Wild-Ducks, you must wall in a little piece of ground, in which is some little pond or spring, and cover the top of it all over with a strong net: the pond must be set with many tufts of Oziers, and have many secret holes, and creeks,

creeks, for that will make them delight and feed though imprisoned. The wild-duck when she layeth, will steal from the Drake and hide her nest, for he else will suck the Eggs. When she hath hatcht she is most careful to nourish them, and needeth no attendance more than meat, which would be given fresh, twice a day, as scalded Bran, Oats or Fitches. The house-hen will hatch wild-Ducks eggs, and the meat will be much the better, yet every time they go into the water, they are in danger of the Kite, because the hen cannot guard them. In the same manner as you nourish wild-Ducks, so you may nourish Teils, Widgens, Sheldrakes or green Plovers.

CHAP. XIX.

Of Swans, and their feeding.

TO speak of the breeding of Swans is needless, because they can better order themselves in that business, than any Man can direct them, only where they build their nests, you shall suffer them to remain undisturbed, and it will be sufficient: but for the feeding them fat for the dish; you shall feed your Cygnets in all sorts as you feed your Geese, and they will be through fat in seven or eight weeks, either coopt in the house, or else walking abroad in some private court; but if you would have them fat in shorter space, then you shall feed them in some pond, hedg'd or pal'd in for that purpose, having a little dry ground left, where they may sit and prune themselves, and you may place two troughs, one full of Barley and water, the other full of old dryed Malt, on which they may feed at their pleasure; and thus doing they will be fat in less than four weeks: for by this means a Swan keepeth himself neat and clean, who being a much defiled Bird, liveth in dry places so uncleanly, that they cannot prosper, unless his attender be diligent to dress and trim his walk every hour.

CHAP. XX.

Of Peacocks, and Peahens, their increase, and ordering.

PEacocks, howsoever our old writers are pleased to deceive themselves in their praises, are birds more to delight the eye

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by looking on them, than for a particular profit; the best commodity arising from them, being the clensing and keeping of the yard free from venemous things, as Toads, Newts, and such like, which is their daily food: whence it comes, that their flesh is very unwholsome; and used in great banquets more for the rareness than the nourishment, for it is most certain, roast a Peacock or Peahen never so dry, then set it up, and look on it the next day, and it will be blood raw, as if it had not been roasted at all.

The Peahen loves to lay her eggs abroad in bushes and hedges, where the Cock may not find them, for if he do, he will break them; therefore as soon as she begins to lay, separate her from the Cock and house her till she have brought forth her young, and that the cronet of feathers begin to rise at their foreheads, and then turn them abroad, and the Cock will love them, but not before. A Peahen sits just thirty daies, and in her sitting, any grain, with water, is food good enough: before your Chickens go abroad, you shall feed them with fresh green Cheese, and Barly-meal, with water, but after they go abroad, the Dam will provide for them. The best time to set a Peahen is, at the beginning of the Moon, and if you set Hens eggs amongst her eggs, she will nourish both equally. The Pea-chickens are very tender, and the least cold doth kill them, therefore you must have a care to keep them warm, and not to let them go abroad but when the Sun shineth. Now for the feeding of them, it is a labour you may well save, for if they go in a place where there is any corn stirring, they will have part, and being meat which is seldome or never eaten, it mattereth not so much for their fatning.

CHAP. XXI.

Of the tame Pidgeon, or rough footed.

THe tame rough-footed Pidgeon differs not much from the wild Pidgeon, only they are somewhat bigger, and more familiar, apt to be tame; they commonly bring not forth above one pair of Pidgeons at a time, and those which are the lest of body are ever the best breeders, they must have their rooms and boxes made clean once a week; for they delight much in neatness

nesse; and if the walls be outwardly whited or painted, they love it the better, for they delight much in fair buildings. They will bring forth their young ones once a month, if they be well fed, and after they be well pair'd they will never be divided. The Cock is a very loving and natural bird, both to his Hen and the young ones, and will sit the Eggs while the Hen feedeth, as the Hen sits whilst he feedeth: he will also feed the young with as much painfulnes as the Dam doth, and is best pleased when he is brooding them. These kinde of Pidgeons you shall feed with white Pease, Tares, and good store of clean water. In the room where they lodge you shall ever have a salt Cat for them to pick on, and that which is gathered from Salt-Peter is the best: also they would have good store of dry Sand, Gravel, and Pibble, to bathe and clense themselves withall, and above all things great care taken, that no vermine, or other Birds come into their boxes, especially Sterlings, and such like, which are great Egg-suckers. And thus much of the tame Pidgeon.

CHAP. XXII.

Of nourishing and fatting, Hearns, Puets, Guls, and Bitterns.

HEarns are nourished for two causes; either for Princes sports to make trains for the entring their Hawks, or else to furnish on the Table at great Feasts: the manner of bringing them up with the least charge, is to take them out of their nests before they can flye, and put them into a large high Barn, where there is many high and cross beams for them to pearch on: then to have on the floor divers square boards with rings in them, and between every board which would be two yards square, to lace round shallow tubs full of water; then to the boards you shall tye great gobbets of Dogs flesh, cut from the bones, according to the number which you feed: and be sure to keep the house sweet, and shift the water oft, only the house must be made so that it may rain in now and then, in which the Hearn will take much delight. But if you feed her for the dish, then you shall feed them with Livers, and the intrails of Beasts, and such like, cut in great gobbets; and this manner of feeding will also feed either Gull, Puet, or Bittern: but the Bittern is ever best to be fed by the hand, because when you have fed him, you must tye his beak together; or he will cast up his meat again.

CHAP. XXIII.

Of feeding the Patridge, Phesant, and Quail.

THese three are the most daintiest of all Birds, & for the Phesant or Partridge, you may feed them both in one room where you may have little boxes where they may run and hide themselves in divers corners of the room; then in the midst you shall have three wheat sheaves, two with their ears upward, and one with the ears downward, and near unto them shallow tubs with water, that the fowl may peck wheat out of the ears, and drink at their pleasures, and by this manner of feeding, you shall have them as fat as is possible; as for your Quails, the best feeding them is in long flat shallow boxes, each box able to hold two or three dozen, the foremost side being set with round pins so thick that the Quailes do no more but put out her head, then before that open side, shall stand one trough full of small chilter-wheat, another with water, and thus in one fortnight, or three weeks you shall have them exceeding fat.

CHAP. XXIV.

Of Godwits, Knots, Gray-plover, or Curlews.

FOr to feed any of these Fowls which are esteemed of all other the daintiest and deareſt, fine Chilter-wheat, and water given them thrice a day, Morning, Noon, and Night, will do it very effectually; but if you intend to have them extraordinary and crammed fowl, then you shall take the fineſt dreſt wheat-meal, and mixing it with Milk, make it into paste, and ever as you knead it, sprinkle into it the grains of small Chilter wheat, till the paste be fully mixt therewith; then make little small crams thereof, and dipping them in water give to every fowl according to his bigneſs, and that his gorge be well filled: do thus as oft as you shall finde their gorges empty, and in one fortnight they will be fed beyond measure, and with these crams you may feed any fowl of what kind or nature soever.

CHAP. XXV.

Of feeding Black-birds, Thrushes, Felfares, or any small Birds whatsoever.

TO feed these Birds, being taken old & wild, it is good to have some of their kinds tame to mix among them, and then putting

ting them into great cages of three or four yards ſquare, to have divers troughs placed therein, ſome filled with Haws, ſome with Hempſeed, and ſome with water, that the tame teaching the wild to eat, and the wild finding ſuch change and alteration of food, they will in twelve or fourteen daies grow exceeding fat, and fit for the uſe of the Kitchin.

The end of the Poultry.

Of Hawks.

CHAP. I.

Of the general Cures for all Diſeaſes and Infirmities in Hawks, whether they be ſhort winged Hawks, or long winged Hawks, and firſt of Caſtings.

HAwks are divided into two kinds, that is to ſay, ſhort winged Hawks, as the Goſhawk and her Tercel, the Sparrow-hawk and her Musket, and ſuch like, whoſe wings are ſhorter than their trains, and do belong to the Oſtringer; and long winged Hawks, as the Faulcon gentle and her Tercel, the Gerfaulcon and Jerking, the Lanner, Merlin, Hobby and divers others. Now foraſmuch as their infirmities for the moſt part, proceed from the indiſcretion of their Governours, if they flye them out of ſeaſon before they be inſeamed, and have the fat, glut, and filthineſs of their bodies ſcoured and clenſed out; I think it not amiſs firſt to ſpeak of Hawks caſtings; which are the naturalleſt and gentleſt purges, or ſcourings a Hawk can take, and doth the leaſt offend the vital parts. Therefore, you ſhall know, that all Oſtringers do eſteem plumage, and the ſoft feathers of ſmall Birds, with ſome part of the skin to be the beſt caſting a ſhort winged Hawk can take; and for the purging of the head, to make her tyre much upon

sheeps Rumps, the fat cut away, and the bones well covered with parsly. But for long winged Hawks, the best casting is fine Flannel, cut into square pieces of an inch and half square and all to be jagg'd, and so given with a little bit of meat. By these castings you shall know the soundness and unsoundness of your Hawk: for when she hath cast, you shall take up the casting, which will be like a hard round pellet, somewhat long, and press it between your fingers, and if you find nothing but clear water come from it, then it is a sign your Hawk is well and lusty; if there come from it a yellowish filthy matter, or if it stink, it is a sign of rottenness and disease; but if it be greazie or slimy on the one side, then it is a sign the Hawk is full of grease inwardly, which is not broken nor dissolved: and then you shall give her a scouring, which is a much stronger purgation; and of scourings the gentlest, next casting, is to take four or five pellets of the yellow root of Selladine well cleansed from filth, being as big as great pease, and give them out of the water early in the morning when the Hawk is fasting, and it will clense her mightily.

If you take the pellets of Selladine, and give them out of the Oyl of Roses, or out of the sirrup of Roses, it is a most excellent scouring also, only it will for an hour or two make the Hawk somewhat sickish. If you give your Hawk a little *Aloes Cicatrine*, as much as a bean, wrapt up in her meat, it is a most soveraign scouring, and doth not only avoid grease, but also killeth all sorts of Worms whatsoever.

If your Hawk by over-flying, or too soon flying, be heated and inflamed in her body, as they are much subject thereunto: you shall then to cool their bodies, give them stones: These stones are very fine white pibbles, lying in the Sands of gravelly Rivers, the bigness whereof you may choose according to the bigness of your Hawk, as some no bigger than a Bean, and those be for Merlyns or Hobbies; some as big as two Beans, and they are for Faulcons gentle, Lanners, are such like; and some much bigger then they, which are for Gerfaulcons, or such like. And these stones if they be full of crests and welts, they are the better, for the roughest stone is the best; so it be smooth and not greetty. And you shall understand, that stones are most proper for long-wing'd Hawks, and the number which you shall give at the most

must

muſt never exceed fifteen, for ſeven is a good number, ſo is nine or eleven, according as you find the Hawks heat more or leſs, and theſe ſtones muſt ever be given out of fair water, being before very well pickt and trim'd from all durt and filthineſs. And thus much of Hawks caſtings, ſcourings, and ſtones.

CHAP. II.

Of Impoſthumes in Hawks.

IF your Hawk have any impoſtume riſing from her, which is apparent to ſeen, you ſhall take ſweet raiſins, and boil them in Wine, and then cruſhing them, lay them warm to the ſore, and it will both ripen and heal it: only it ſhall be good to ſcoure your Hawk very well inwardly, for that will abate the flux of all evil humours.

CHAP. III.

Of all ſorts of ſore eyes.

FOr any ſore eye, there is nothing better than to take the juyce of ground Ivy, and drop it into the Eye. But if any Web be grown before you uſe this Medicine, then you ſhall take Ginger finely fearſt, and blow it into the Eye, and it will break the Web, then uſe the juyce of Ivy, and it will wear it away.

CHAP. IV.

Of the Pantas in Hawks.

THe Pantas is a ſtopping, or ſhortneſs of wind in Hawks, and the cure is, to give her the ſcowring of Selladine, and the oyl of Roſes, and then to waſh her meat in the decoction of *Coltsfoot*, and it will help her.

CHAP. V.

Of caſting the Gorge.

THis is when a Hawk, either through meat which ſhe cannot digeſt, or through ſurfeit in feeding, caſteth up the meat which ſhe hath eaten, which is moſt dangerous. And the only way to cure her, is to keep her faſting, and to feed her with a very little at once of warm bloody meat, as not above half a Sparrow at a time, and be ſure never to feed her again, till ſhe have indued the firſt.

CHAP.

CHAP. VI.

Of all sorts of Worms, or Fylanders in Hawks.

VVOrms or Fylanders, which are a kinde of Worms in Hawks, are either inward or outward; inward, as in the guts or intrails; or outward, as in any joynt or member: if they be inward, the scouring of Aloes is excellent to kill them; but if they be outward, then you shall bathe the place with the juyce of the Herb *Ameos* mixt with *Honey*.

CHAP. VII.

Of all swelling in Hawks feet, and of the pin in the foot.

FOr the pin in the sole of the Hawks foot: or for any swelling upon the foot, whether it be soft or hard, there is not any thing more soveraign, then to bathe it in *Patch-grease* molten, and applied to, exceeding hot; and then to fold a fine Cambrick rag dipt in the same grease about the sore.

CHAP. VIII.

Of the breaking of a Pounce.

THis is a very dangerous hurt in Hawks, especially in *Gerfaulcons*; for if you break or rive her pounce, or but coape it so short that she bleed, though it be very little, yet it will indanger her life: the cure therefore is, presently upon the hurt, with a hot wyar so sear it, till the blood staunch, and then to drop about it pitch of Burgundy, and wax mixt together, or for want thereof, a little hard Merchants wax, and that will both heal it, and make the Pounce grow.

CHAP. IX.

Of Bones broken, or out of joynt.

IF your Hawk have any bone broken or misplaced, you shall after you have set it, bathe it with the Oyl of *Mandrake* and *Swallows*, mixt together, and then splent it, and in nine daies it will be knit and have gotten strength.

CHAP.

CHAP. X.

Of inward bruisings in Hawks.

IF your Hawk either by stooping amongst Trees, or by the incounter of some fowl, get any inward bruise, which you shall know by the blackness, or bloodiness of their mutes, you shall then anoint her meat every time you feed her, with *Sperma-Cæti*, till her mutes be clear again, and let her meat be warm and bloody.

CHAP. XI.

Of Killing of Lice.

IF your Hawk be troubled with Lice, which is a general infirmity, and apparent, for you shall see them creep all over on the outside of her feathers if she stand but in the air of the fire. You shall bathe her all over in warm water and Pepper small beaten, but be sure that the water be not too hot; for that is dangerous; neither that it touch her eyes.

CHAP. XII.

Of the Rye in Hawks.

THis disease of the Rye in Hawks proceedeth from two causes; the one is cold and poze in the head, the other is foul and most uncleanly feeding, the Faulconer being negligent to seek and cleanse his Hawks beak and nares, but suffering the blood and filthiness of meat to stick and cleave thereunto. For indeed the infirmity is nothing else but a stopping up of the nares: by means whereof, the Hawk not being able to cast and avoid the corruption of her head, it turns to putrifaction, and in short space kills the Hawk: and this disease is a great deal more incident to short winged Hawks than to long. The signs whereof are apparent by the stopping of the nares. The cure is to let your Hawk tyre much upon sinewy and bony meat, as the rumps of Mutton (the fat being taken away) or the pinions of the wings of fowl, either being well lapt in a good handful of Parsly, and forcing her to strain hard in the tearing of the same,, and with much diligence to cleanse and wash her beak clean with water after her feeding, especially if her meat were warm and bloody.

CHAP.

CHAP. XIII.

Of the Frounce.

THe Frounce is a Cankerous Ulcer in a Hawks mouth, got by over-flying, or other inflammation proceeding from the inward parts; foul and unclean food is also a great ingenderer of this disease. The signs are a soreness in the Hawks mouth, which sore will be furr'd and cover'd over with white scurf, or such like filthiness; also if the Ulcer be deep and ill, the Hawk will wind and turn her head awry, making her beak stand upright; and the cure is to take Allom, and having beaten it to fine powder, mix it with strong Wine-vinegar, till it be somewhat thick, and then wash and rub the sore therewith till it be raw, and that the scurf be clean taken away. Then take the juyce of *Lollium*, and the juyce of *Radish*, and mixing it with Salt, anoint the sore therewith, and in few daies it will cure it.

CHAP. XIV.

Of the Rhume.

THe Rhume is a continual running, or dropping at the Hawks nares, proceeding from a general cold, or else from over-flying, and then a sudden cold taken thereupon; it stoppeth the head, and breeds much corruption therein, and the signs are the dropping before-said, and a general heaviness, and sometimes a swelling of the head. The cure is, to take the juyce of *Beets*, and squirt it oft into the Hawks nares. Then when you feed her, wash her meat in the juyce of *Broomwort*, and it will quickly purge, and set her sound.

CHAP. XV.

Of the Fornicas in Hawks.

THe Fornicas in Hawks is a hard horn growing upon the back of a Hawk, ingendred by a poysonous and Cankerous Worm, which fretting the skin and tender yellow welt between the head and the beak, occasioneth that hard horn, or excretion to grow or offend the bird: the sign is the apparent sight of the horn, and the cure is, to take a little of a Bulls Gall, and beating it with Aloes, anoint the Hawks beak therewith morning and

an evening, and it will in very few daies take the horn away.

CHAP. XVI.

Of the Fistula in Hawks.

THe Fistula in hawks is a cankerous, hollow Ulcer in any part of a hawks body, as it is in mens, beasts, or any other creature: the signs are, a continual mattering, or running of the sore, and a thin, sharp water like lye, which as it falls from the same, will fret the sound parts as it goeth. The cure is, with a fine small wiar, little stronger than a verginal-wiar, and wrapt close about with a soft fleaved silk, and the point blunt and soft, to search the hollowness and crookedness of the ulcer, which the pliantness of the wiar will easily do; and then having found out the bottome thereof, draw forth the wiar, and according to the bigness of the Orifice, make a tent of fine lint being wet, which may likewise bend as the wiar did, and be within a very little as long as the ulcer is deep; for to tent it to the full length is ill, and will rather increase than diminish the Fistula, and therefore ever as the Fistula heals, you must take the tent shorter and shorter. But to the purpose, when you have made your tent fit, you shall first take strong Allom-water; and with a small Syringe squirt the sore three or four times therewith, for that will cleanse, dry, and scour every hollowness in the ulcer: then take the tent and anoint it with the juice of the herb *Robert*, *Vinegar*, and *Allom* mixt together and it will dry up the sore. The Cure.

CHAP. XVII.

Of the Privy Evill in Hawks.

THe privy evil in hawks is a secret heart-sickness, procured either by over-flying, corrupt food, cold or other disorderly keeping; but most especially for want of stones or casting in the due season: the signs are, heaviness of head, and countenance, evil enduing of her meat, and foul black mutings. The cure is, to take morning and evening a good piece of a warm sheeps heart, and steeping it either in new Asses milk, or new Goats milk, or for want of both, the new milk of a red Cow, with the same to feed your Hawk, till you see her strength and lust recovered.

T CHAP.

CHAP. XVIII.

Of wounds in Hawks.

HAwks by the croſs incounters of fowls eſpecially the Heron, by ſtooping amongſt buſhes, thorns, trees, and by divers ſuch accidents, do many times catch ſores and moſt grievous wounds, the ſigns whereof are the outward appearance of the ſame. And the cure is if they be long and deep, and in place that you may conveniently, firſt to ſtitch them up, and then to taint them up with a little ordinary Balſamum, and it is a preſent remedy. But if it be in ſuch a place as you cannot come to ſtitch it up, you ſhall then only take a little lint, and dip it in the juyce of the hearb called *Mouſ-ear*, and apply it to the ſore, and it will in ſhort ſpace heal it. But if it be in ſuch a place as you can by no means bind any thing thereunto, you ſhall then only anoint or bathe the place with the aforeſaid juice, and it will heal and dry up the ſame in very ſhort time; the juice of the green hearb called with us, Engliſh Tobacco, will likewiſe dō the ſame: for it hath a very ſpeedy courſe in healing and cleanſing, as hath been approved by divers of the beſt Faulconers of this Kingdome, and other nations.

CHAP. XIX.

Of the Apoplexie, or falling evil in Hawks.

THe Apoplexy, or falling evil in Hawks is a certain Vertigo or dizzineſs in the brain, proceeding from the oppreſſion of cold humours which do for a certain ſpace numb, and as it were mortifie the ſenſes: the ſigns are, a ſudden turning up the hawks head, and falling from her pearch without bating, but only with a general trembling over all the body; and lying ſo, as it were in a traunce a little ſpace, ſhe preſently recovereth, and riſeth up again, but is ſick and heavy many hours after. The cure therefore is, to gather the herb *Aſterion* when the moon is in the Wain, and in the ſign Virgo, and taking the juice thereof to waſh your hawks meat therin, and to feed her, and it hath been found a moſt ſoveraign medicine.

The Cure.

CHAP.

CHAP. XX.

Of the purging of Hawks.

THere is nothing more needful to hawks than purgation, and cleanſings; for they are much ſubject to fat and foulneſs of body inwardly, and their exerciſe being much and violent, if there be neglect, and that their glut be not taken away, it will breed ſickneſs and death; therefore it is the part of every skilful Faulconer, to underſtand how and when, to purge his hawk, which is generally ever before ſhe be brought to flying, and the moſt uſuall ſeaſon for the ſame, is before the beginning of Autumn, for commonly knowing Gentlemen will not flye at the Partridge, till corn be from the ground; and if he prepare for the River early, he will likewiſe begin with that ſeaſon: the beſt purgation then, that you can give your hawk, is *Aloes Cicatrine* wrapt up in warm meat, the quantity of a French peaſe, and ſo given the hawk to eat ever the next morning after ſhe hath flown at any train, or taken other exerciſe, whereby ſhe may break or diſſolve the greaſe within her.

CHAP. XXI.

For a Hawk that cannot mute.

IF your hawk cannot mute, as it is a common infirmity which happeneth unto them, you ſhall take the lean of pork, being newly kild, whilſt it is warm, to the quantity of two Walnuts, and lapping a little *Aloes* therein, give it the hawk to eat, and it will preſently help her. There be divers good Faulconers in this caſe, which will take the roots of Selandine, and having cleanſed it, and cut it into little ſquare pieces as big as Peaſe, ſteep it in the oyl of Roſes, and ſo make the hawk ſwallow down three or four of them, and ſure this is very good and wholſome, only it will make the hawk exceeding ſick for two or three hours after. Neither muſt the Hawk be in any weak ſtate of body, when this later medicine is given her. Alſo, you muſt obſerve to keep your hawk at thoſe times exceeding warm, and much on your fiſt, and to feed her moſt with warm birds, leſt otherwiſe you cling and dry up her entrails too much, which is both dangerous and mortal.

CHAP. XXII.

The assured sign to know when a Hawk is sick.

HAwks are generally of such a stout, strong, and unyielding nature, that they will many times cover and conceal their sicknesses so long, till they be grown to that extremity, that no help of Physick, or other knowledge can avail for their safety: for when the countenance, or decay of stomach, which are the ordinary outward faces of infirmities appear, then commonly is the disease past remedy. Therefore to prevent that evil, and to know sickness whilst it may be cured, you shall take your hawk, and turning up her train, if you see that her tuel or fundament either swelleth or looketh red, or if her eyes or ears likewise be of a fiery complexion, it is a most infallible sign that the hawk is sick, and much out of temper.

CHAP. XXIII.

Of the Feaver in Hawks.

HAwks are as much subject to Feavers, as any creatures whatsoever, and for the most part they proceed from over-flying, or other extraordinary heats, mixt with sudden colds, given them by the negligence of unskilful keepers. And the cure is, to set her in a cool place, upon a pearch, wrapt about with her cloaths and feed her oft with a little at a time of chickens flesh steeped in water, wherein hath been soaked Cucumer-seeds. But if you find by the stopping of her ears or head, that she is offended more with cold than heat, then you shall set her in a warm place, and feed her with the bloody flesh of pigeons, washt either in white-wine, or in water, wherein hath been boiled either Sage, Marjerom, or Camomil.

The Cure.

CHAP. XXIV.

To help a Hawk that cannot disgest her meat.

IF your Hawk be hard of disgestion, and neither can turn it over, nor empty her panel, which is very often seen, you shall then take the heart of a Frog, and thrust it down into her throat, and pull it back again by a thread fastned thereunto once or twice suddenly, and it will make her cast her gorge presently.

CHAP.

CHAP. XXV.

Of the Gout in Hawks.

HAwks, especially those which are free and strong strikers, are infinitely subject to the Gout, which is a swelling, knotting, and contracting of a Hawks feet: The cure thereof is, to take two or three drops of blood from her thigh-vein, a little above her knee, and then anoint the feet with the juice of the herb Hollihock. and let all her pearch be anointed also with tallow, and the juice of that herb mixt together. Now if this disease, (as oft it hapneth) be in a Hawks wing, then you shall take two or three drops of blood from the vein under her wing, and then anoint the pinions and inside thereof, with *Unguentum de Althea* made very warm, which you may buy of every Apothecary. The Cure.

CHAP. XXVI.

Of the staunching of Blood.

IT is a known experience amongst the best Faulconers, that if the Gerfaulcon shall but lose two or three drops of blood it is mortal, and the Hawk will die suddenly after; which to prevent, if the blood proceed from any pounce, which is most ordinary, then upon the instant hurt, you shall take a little hard Merchants wax, and drop it upon the sore, and it will presently stop it; if it be upon any other part of the hawks body, you shall clap thereunto a little of the soft down of a Hare, and it will immediately stanch it; without these two things, a good Faulconer should never go, for they are to be used in a moment. And thus much of the hawk and her diseases.

Of Bees.

CHAP. I.

Of the nature, ordering, and preservation of Bees.

OF all the creatures which are behoveful for the use of man, there is nothing more necessary, wholsome, or more profitable, than the Bee; nor any less troublesome, or less chargeable. To speak first of the nature of Bees, it is The nature of a Bees.

a creature gentle, loving and familiar about the man, which hath the ordering of them, so he comes neat, sweet and cleanly amongst them, otherwise if he have strong, and ill smelling savours about him, they are curst and malicious, and will sting spitefully, they are exceeding industrious and much given to labour, they have a kinde of government amongst themselves, as it were a well-ordered Common-wealth, every one obeying and following their King or Commander, whose voice (if you lay your ear to the hive) you shall distinguish from the rest, being louder and greater, and beating with a more solemn measure. They delight to live amongst the sweetest hearbs, and flowers, that may be, especially Fennel, and wall Gilly-flowers, and therefore their best dwellings are in gardens: and in these gardens, or near adjoyning thereunto, would be divers fruit trees growing, chiefly plum-trees, or peach-trees; in which, when they cast, they may knit, without taking any far flight, or wandring to find out their rest: this garden also would be well fenced, that no Swine nor other Cattel may come therein, as well for overthrowing their hives, as also for offending them with their ill savours. They are also very tender, and may by no means indure any cold; wherefore you must have a great respect to have their houses exceeding warm, close, and tight, both to keep out the frost and snow, as also the wet and rain; which if it once enter into the hive, it is a present destruction.

Of the Bee hive.

To speak then of the Bee-hive, you shall know there be divers opinions touching the same, according to the customes and natures of Countries; for in the champian Countries, where there is very little store of woods, they make their hives of long Rye straw, the touls being sowed together with bryers; and these hives are large and deep, and even proportioned like a Sugar-loaf, and cross-bar'd within, with flat splints of wood, both above and under the midst part. In other champian Countries where they want Rye straw, they make them of Wheat-straw, as in the West Countries, and these hives are of a large compass, but very low and flat, which is naught, for a hive is better for his largeness, and keepeth out the rain best when it is sharpest. In the wood Countries, they make them of cloven hasels, watteld about with broad splints of ash; and so formed, as before I said, like a Sugar-loaf.

And

And these hives are of all other the best, so they be large and smooth within, for the straw hive is subject to breed mice, and nothing destroyeth Bees sooner than they, yet you must be governed by your ability, and such things as the soil affords.

Now for the Wood-hive which is the best, you shall thus trim and prepare it for your Bees: you shall first make a stiff morter of lime and Cow dung, mixed together; and then having cross barred the hive within, daub the out-side of the hive with the morter, at least three inches thick, down close unto the stone; so that the least air may not come in: then taking a Rye-sheaf, or Wheat-sheaf, or two that is balted, and not thrashed, and chusing out the longest straws, binde the ears together in one lump, put it over the hive, and so as it were thatch it all over, and fix it close to the hive with an old hoop, and this will keep the hive inwardly as warm as may be; also, before you lodge any Bee in your hive, *you shall perfume it with Juniper, and rub it all within with Fennel, Hyssop, and Time flowers; and also the stone upon which the hive shall stand.* Of the trimming of the Hive.

Now for the placing of your hive, you shal take three long, thick stakes, cut smooth and plain upon the heads, and drive them into the earth triangular wise, so that they may be about two foot above the ground: *then lay over them a broad smooth paving stone, which may extend every way over the stakes above half a foot: and upon the stone set your hive, being less in compass than the stone by more than six inches every way; and see the door of your hive stand directly upon the rising of the morning Sun, inclining a little unto the Southward: and be sure to have your hives well sheltred from the North winds, and generally from all tempestuous weather: for which purpose if you have sheads to draw over them in the winter, it is so much the better. And you shall place your hives, in orderly rows one before another, keeping clean allies between them every way, so as you may walk and view each by it self severally.* The placing of hives.

Now for the casting of your Bees, it is earlier or later in the year, according to the strength and goodness of the Stock, or the warmth of the weather. The usual time for casting, is from the beginning of *May*, till the middle of *July*: and in all that time you must have a vigilant eye, or else some servant to watch their rising, lest they flye away, and knit in some obscure place far from

from your knowledge: yet if you please, *you may know which hives are ready to cast a night before they do cast, by laying your ear after the Sun-set to the hive, and if you hear the Master Bee above all the rest, in a higher and more solemn note, or if you see them lye forth upon the stone, and cannot get into the hive, then be sure that stock will cast within few hours after.*

As soon as you can perceive the swarm to rise, and are got up into the air, *(which will commonly be in the height and heat of the Sun)* you shall take a Brass *Bason*, *Pan*, or *Candlestick*, and make a tinkling noise thereupon, for they are so delighted with musick, that by the sound thereof they will presently knit upon some branch or bough of a tree. Then when they are all upon one cluster, you shall take a new sweet hive well drest, and rubb'd with Hony and Fennel, and shake them all into the hive; then having spread a fair sheet upon the ground, set the hive thereon, and cover it all clean over close with the sheet, and so let it stand till after Sun-set; at which time the Bees being gathered up to the top of the hive (as their nature is) you shall set them upon the stone having rubb'd it with Fennel; and then daub it close round about with lime and dung mixt together, and only leave them a door or two to issue out and in at. There be some stocks, which will cast twice or thrice, and four times in a year; but it is not good, for it will weaken the stock too much; therefore to keep your stocks in strength and goodness, it is not good to suffer any to cast above twice at the most.

Again, you shall with pieces of brick or other smooth stones, raise the stock in the night, three or four inches above the stone, and then daub it close again, and the Bees finding house-room, will fall to work within, and not cast at all; and then will their stocks be worth two others: and in the same manner, if you had the year before any small swarms, which are likely to cast this year, or if you have any early swarms, this year, which are likely to cast at the later end of the year: both which are often found to be the destruction of the stocks: in either of these cases, you shall inlarge the hive, as it is before said, by raising it up from the stone, and it will not only keep them from casting, but make the stock better, and of much more profit; for that hive which is of the most weight, is of the best price.

Now-

Now when you have mark't out those old Stocks, which you intend to sell (*for the oldest is fittest for that purpose*) you shall know that the best time to take them is at *Michaelmas*, before any Frosts hinder their labour: and you shall take them ever from the stone in the dark of night, when the aire is cold, and either drown them in water, or smother them with Fusbals; for to chase them from their Hives, as some do, is naught, because all such Bees as are thus frighted from their Hives, do turn robbers; and spoyl other stocks, because that time of the year will not suffer them to labour, and get their own livings.

Now if you have any weak Swarms which coming late in the year cannot gather sufficient of Winter provision; in this case you shall feed such stocks by daily smearing the stone before the place of their going in and out, with Honey and Rose-water mixt together, and so you shall continue to do all the strength of Winter, till the warmth of the Spring, and the Sun-shine bring forth store of flowers for them to labour on. You shall continually look that no Mice, and such like Vermine breed about the Hives, for they are poysonous, and will make Bees forsake their Hives.

Now lastly, if any of your stocks happen to dye in the Winter (as amongst many, some must quail) you shall not by any means stir the stock, but let it remain till the Spring, that when you see your Bees begin to grow busie, then take up the dead stock, and trim it clean from all filth, but by no means stir or crush any of the Combs, then dash the Combs, and besprinkle them, and besmear all the inside of the Hive with Honey, Rose-water, and the juyce of Fennel mixt together, and daub also the stone therewith. Also then set down the Hive again, and daub it as if it had never been stirred; and be well assured, that the first Swarm which shall rise, either of your own, or of any Neighbours of yours within the compass of a mile, it will knit in no place, but within that Hive, and such a stock will be worth five others, because they finde half their work finished at their first entrance into the Hive; and this hath been many times approved by those of the most approved'st experience. And thus much touching the Bee and his Nature.

A Plat-form for Ponds, which the Printer hath added to this ensuing discourse, for the better satisfaction and delight of such as having a convenient Plat of ground for the same purpose, shall be desirous to make any Ponds for the encrease and store of Fish.

G. The Gate.

D. The Ditch and Quickset Hedge.

W. The Walks.

B. The Bridge.

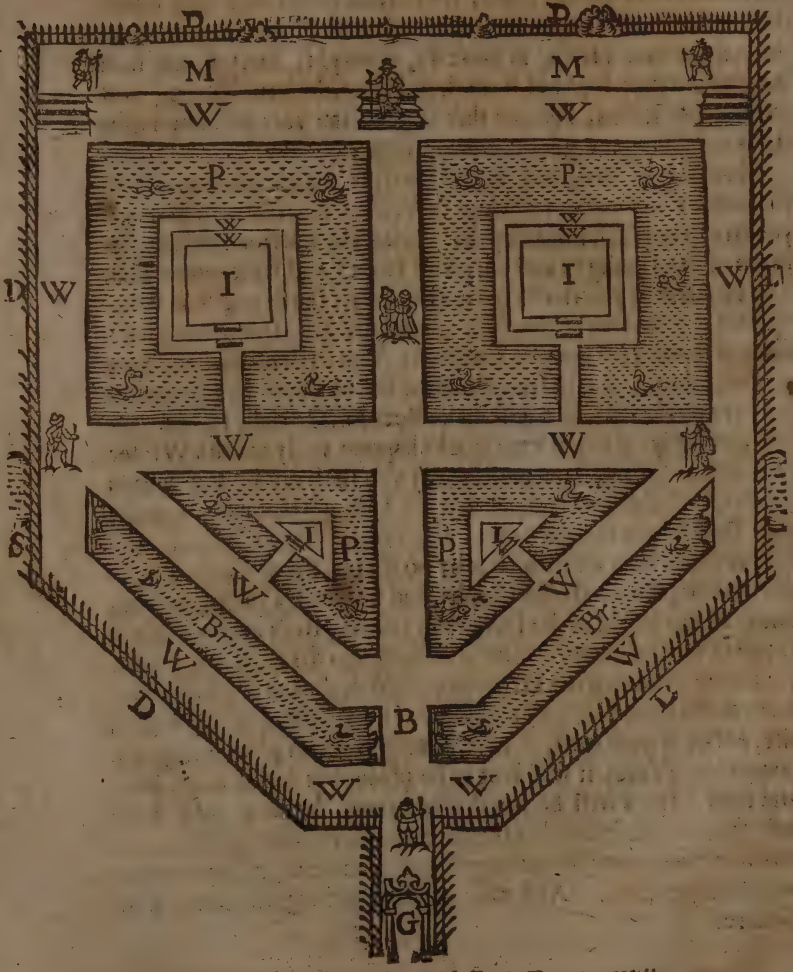
Br. The Brook.

P. The Ponds.

I. The Peniles.

M. The Mount.

S. The Spring.



The Walks about the Ponds may be planted with Fruit Trees, or Willows.

Of

Of Fishing.

CHAP. I.

Of Fishing in general; and first of the making of the Fish-Pond.

FOrasmuch as great Rivers do generally belong either to the King, or the particular Lords of several Manors, and that it is only the Fish-Pond which belongeth to private persons, I will as a thing most belonging to the general profit, here treat of Fish-Ponds. And first touching the making of them, you shall understand, that the Grounds most fit to be cast into Fish-ponds, are those which are either marishy, boggy, or full of Springs, and indeed most unfit either for grazing, or any other use of better profit. And of these grounds, that which is full of clear Springs will yield the best water; that which is marishy will feed Fish best; and that which is boggy will defend the Fish from being stolne.

Having then such a piece of waste ground, and being determined to cast it into a Fish-pond: you shall first by small trenches, draw all the springs or most veins into one place, and so drain the rest of the ground, and then having markt out that part which you mean to make the head of your pond, which although it be the lowest part in the true levell of the ground, yet you shall make it the highest in the eye; you shall first cut the trench of your flood-gate, so as the water may have a swift fall, when you mean at any time to let it out; and then on each side of the trench drive in great stakes of six foot in length, and six inches square, of Oak, Ash, or Elm, but Elm is the best, and these you must drive in rowes within four foot one of another, at least four foot into the earth, as broad and as far off each side the Floud-

gate as you intend the head of your Pond shall go; then begin to dig your Pond of such compasse as your ground will conveniently give leave, and all the earth you digg out of the Pond, you shall carry and throw amongst the stakes, and with strong rammers ram the Earth hard between them, till you have covered all the stakes; then drive in as many more new stakes besides the heads of the first, and then ramme more earth over and above them also; And thus do with stakes above stakes, till you have brought the head sides to such a convenient height as is fitting. And in all this work have a special care, that you make the inside of your banks so smooth, even, and strong that no current of the water may wear the earth from the stakes.

You shall digge your Fish-pond not above eight foot deep and so as it may carry not above six foot water.

You shall pave all the bottome and banks of the Pond with large sods of Flot-grasse, which naturally grows under water, for it is a great feeder of Fish: and you shall lay them very close together, and pinne them downe fast with small stakes and windings. You shall upon one side of the Pond, in the bottome, stake fast divers Bavens or Faggots of brush-wood, wherein your Fish shall cast their Spawn, for that will defend it from destruction; and at another place you shall lay sods upon sods, with the grasse sides together, in the bottom of the Pond, for that will nourish and breed Eeles: and if you stick sharp stakes likewise by every side of the Pond, that will keep Theeves from robbing them. When you have thus made your Ponds, and have let in the water, you shall then store them; Carp, Bream, and Tench by themselves; and Pike, Pearch, Eele, and Tench by themselves: for the Tench being the Fishes Physitian is seldom devoured: also in all Ponds you shall put good store of Roch, Dace, Loch, and Menew; for they are both food for the greater Fishes, and also not uncomely in any good man's dish.

You shall to every Melter put three Spawners, and some put five, and in three years the encrease will be great, but in five hardly to be destroyed. And thus much for Ponds and their storings.

CHAP.

CHAP. II.

Of the taking of all sorts of Fish, with Nets, or otherwise.

IF you will take Fish with little or no trouble, you shall take of *Sal-armoniack* a quarter of an ounce, of young *Chives*, and as much of a Calves-Kell, and beat them in a mortar untill it be all one substance, and then make Pellets thereof, and cast them into any corner of the Pond, and it will draw thither all the Carp, Bream, Cheven, or Barbell, that are within the water; then cast your shove-net beyond them, and you shall take choice at your pleasure. If you will take Roch, Dace, or any small kind of Fish, take Wine-lees, and mixe it with Oyl, and hang it in a Chimney-corner till it be dry, or look black; and then putting it into the water, they will come so abundantly to it, that you may take them with your hand. If you will take Trout, or Grailing, take two pound of Wheat bran, half so much of white Pease, and mixing them with strong brine, beat it till it come to a perfect paste: then put Pellets thereof into any corner of the water, and they will resort thither, so as you may cast your Net about them at your pleasure. But if you will take either Pearch or Pike, you shall take some of a Beasts Liver, black Snails, yellow Butterflies, Hogs blood, and Opoponax, beat them altogether, and having made a paste thereof, put it into the water, and be assured, that as many as are within forty paces thereof, will presently come thither, and you may take them at your pleasure.

Lastly, If you take either two drams of Cock-stones, or twice so much of the Kernels of Pine-apple tree burnt, and beat them well together, and make round balls thereof, and put it into the water, either fresh or salt, any Salmon or great Fish will presently resort thither; you may take them either with Net or otherwise.

Also it is a most approved Experiment, That if you take bottles made of Hay, and green Oziers, or Willow mixt together, and sink them down in the middest of your Pond, or by the bank-sides, and so let them rest two or three dayes, having a cord so fastned unto them, that you may twitch them up on Land at your pleasure: believe it, all the good Eeles which are in the

the Pond will come unto those bottles; and you shall take them most abundantly: and if you please to bait those Bottles by binding up Sheeps guts, or other garbage of Beasts within them, the Eeles will come sooner, and you may draw them oftner, and with better assurance. There be other wayes besides these to take Eels, as with Weels, with the Eele-spear, or with bobbing for them with great Worms; but they are so generally known and practised, and so much inferiour to this already shewed, that I hold it a needless and vain labour to trouble your ears with the repetitions of the same; and the rather, sith in this Work I have laboured only to declare the secrets of every knowledge, and not to run into any large circumstance of those things which are most common and familiar to all men. And thus much of Fish and Fish-ponds, and their general knowledge. Now as touching the Angle, and the secrets thereto belonging, you shall find it at large handled in the next Book called *Country Contentments*,

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The Division of the Titles treated of in these Books.

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FINIS.

Country Contentments.

OR, THE

HUSBANDMANS Recreations.

CONTAINING

The Wholsome Experience, in which any ought to Recreate himself, after the toyl of more Serious Business.

As namely,

Hunting, Hawking, Coursing with Grey-Hounds, and the Laws of Leash, Shooting in the Long-Bow or Cross-Bow, Bowling, Tennis, Baloon; The whole Art of Angling; And the use of the Fighting Cock.

By *G. M.*

The Tenth Edition.

Newly Corrected, Enlarged, and adorned with many Excellent Additions, as may appear by this Mark ☞

LONDON,

Printed by *J. Streater*, for *George Sawbridge*, Dwelling on *Clarken-well-Green*, 1668.

To the thrice Noble and Vertuous maintainer and furtherer of all lawful and worthy pleasures, Sir THEODORE NEWTON, Knight.

SIR, Howsoever banished by the necessity of mine Affairs from your presence, (in which I once built the best and happiest estate of my Life, beginning to love it, because I found you did imploy it,) yet can I never be separated from your remembrance, because it is all the joy which is likely to live and dye with me; witness my soul, that shews me no worldly lesson so much, as the beneficial favours I have reapt from your vertue; which to acknowledge with a more earnest and serious fervency, I have sent this poor Book to kiss your hand, and speak to you in plain and short Rules those speeches which you have been willing to hear from my mouth; not doubting but they will give you satisfaction, and make me live both with you, and the inheritors of your vertues, to the last age. They are true and easie, drawn from these last times, not borrowed to bestow with a flattering insinuation, but faithfully drawn from Art, and from those Experiments which I once thought should have slept in the grave with me: but having lived so long from your eyes (which, I protest, my soul truly loves,) I studied to think what grateful Ambassadour I might send to speak I love you: I love you, and finding none which I thought you would better hear than this, I furnisht him with the best instructions I could, and sent him only attired in his own vertue, to tell you what I do, and what I will do, is ever to live and dye at your service,

Gervase Markham.

To the best disposed Readers.

MAny and sundry may be the constructions and censures of this Book (Courteous and well disposed Reader) because I have in former time written so largely of some part of the subject contained herein; but I would have no man mistaken in his own prejudicate opinion, but truly understand, that this is neither Epitome, Relation, Extraction, nor Repetition either of mine own, or any other Author whatsoever: but a plain form of doing things by a nearer and more easie and safer way then ever hath hitherto been discovered, drawn from the latest experiments in true art, and finding a nearer way to our ends by many degrees: for what before could not be done in divers years, here you shall see how to effect in few moneths; and what we bestowed moneths upon to seek, now we may find in few weeks. The Reasons which induc'd me to this labour were these; First to give satisfaction to the friends and favourers of my former Works, that when they hear men discourse of these passages to our delights, they may yet know, that the first was neither ill nor vain, but what now is derived from it; and that albeit we may be less curious, yet the curiosity is not altogether unprofitable, but both joyned together may make an absolute understanding. Then to give ease and a light burthen to the heavy and duller Memory, whom the tediousness of a great work may discourage: And lastly, because my former labour is utterly out of Print, whereby the Kingdome is deprived of the benefit I intended, I thought good to have something living of less price, and as great (perhaps greater) profit, which should satisfie all vertuous minds in any thing required, within the compass of those former shewed Recreations: not doubting but howsoever men may first give a light survey to these papers; yet if they once take pains to read them, they will after affirm them worthy of choice bosomes. And with this setled resolution I leave them to thy view, and thee to thine own rest.

Ever one, Gervase Markham.

Country

Country Contentments.

OR,

The *Husbandmans* Recreation,

CONTAINING

The wholesome Exercises, in which any man ought to Recreate himself, after the toyl of more Serious Business.

The First Book.

CHAP. I.

Of Hunting, and of all the particular Knowledges belonging thereunto.

HAving already in my former Work of the *English Husbandman*, set forth in sufficient largeness, the toyl and industrious labours of the careful *Husbandman*, and how both his Mind and Body ought in every season to be imploy'd for the effecting and bringing forth of those wholsome profits, which God hath appointed for the maintenance of him and his Family: And in the Book last going before

fore called, *Cheap and Good*, shew'd the Cure and maintenance of his Cattle and Creatures bred by him and his labours, through Gods great Blessings; I think it not amiss here to speak of those lawful and praise-worthy exercises or recreations, in which (with Gods fear, and care of not offending his neighbour) he may soberly spend those hours which he shall bestow in the cheerful reviving and stirring up of his spirits, being formerly wearied or foredone with the heavy toyl of more unpleasant (though more profitable) Studies: both because it is intended that a man so good and vertuous as the true *Husbandman* is, should not be deprived of any comfort or felicity, which the Earth or the Creatures of the Earth can afford to him, being indeed the Right Lord and Master (next under God) of them both; as also for the necessity thereof, being the strengthner and enabler of the Mind, to undergo the weightiest affairs that can any way poise or bear down imagination.

The necessity and use of Recreation.

Hence it comes, that the Heathen Sages or Wise men of the first World, founded with their *Laws*, their *Feasts*; with their *Labours*, their *Olympicks*; with their *Warfare*, their *Triumphs*; nay at this day we see the severest Pedants will give their Scholars their play-day, and the most covetous Masters will bind their hirelings but to certain hours; every toyl exacting (as out of duty) some time for Recreation: neither was there any *Stoick* found so cruel, either to himself or nature, but at sometime or other he would unbend his mind, and give it liberty to stray into some more pleasant walks, then the myry ways of his own wilful resolutions. As I have observed in the course of many men of exceeding strict lives, to whom albeit severity of profession, infirmity of body and age, or such like, have taken away all actual recreation, yet have their minds begot unto themselves some habits or customs of delight, which have in as large measure given them contentment, whether they were their own, or borrowed, as if they had been the sole Actors of the same.

But why wade I thus far in this untroubled Stream? Let it suffice then, that as Recreation is most necessary, so to none it is more due then to the *Husbandman*, and herein you may not expect, that I will go about to elect and prescribe what recreation he shall use, binding all men to one pleasure; God forbid: my purpose

purpose is meerly contrary; for I know in mens recreations, that Nature taketh to her self an especial Prerogative, and what to one is most pleasant, to another is most offensive; some seeking to satisfie the Mind, some the Body, and some both, in a joynt motion.

I will therefore, as far as my skill and knowledg will extend, figure forth to the life every several recreation, leaving no limb or member imperfect, and then leave unto the choice of the *Husbandman*, that which shall best agree with his spirit: not doubting but as they are in themselves lawful and modest; so he will use them according to the worthiness of his own, and their vertues. Now for as much as these sports are many and divers, I think it not amiss to begin and give that recreation precedency of place, which in mine opinion (however it may be esteemed partial) doth many degrees go before, and precede all other, as being most royal for the stateliness thereof, most artificial for the wisdome and cunning thereof, and most Manly and Warlike for the use and indurance thereof. And this I hold to be the Hunting of wild Beasts in general: of which as Chases are many, so I will speak of them particularly in their proper places. The praise of Hunting.

But before I proceed any further, I will tell you what *Hunting* is, and from the true definition thereof, make your way more easie and plain into the hidden Art of the same. What Hunting is.

Hunting is then a curious search or conquest of one Beast over another, pursued by a natural instinct of enmity, and accomplished by the diversities and distinction of smells only, wherein *Nature* equally dividing her cunning, giveth both to the offender and offended, strange knowledg both of offence and safety. In this recreation is to be seen the wonderful power of God in his Creatures, and how far rage and policy can prevail against innocency and wisdome.

But to proceed to my main purpose, you shall understand, that as the Chases are many which we daily hunt, as that of the *Stag*, the *Buck*, the *Roe*, the *Hare*, the *Fox*, the *Badger*, the *Otter*, the *Boar*, the *Goat*, and such like; so the pursuers or conquerers of these Chases (speaking of *Hunting* only) are but one kind of Creatures, namely, *Hounds*. Now of these hounds there are divers kinds, as the slow hound, which is a large, great dog, The diversity of Chases. The diversity of Hounds.

dog, tall and heavy, and are bred for the moſt part in the Weſt Counties of this Land, as alſo in *Cheſhire* and *Lancaſhire*, and moſt woodland and mountainous Countries; then the middle ſiz'd dog, which is more fit for the Chaſe, being of a more nimble compoſure, and are bred in *Worceſterſhire*, *Bedfordſhire*, and many other well mixt ſoyls, where the Champain and Covert are of equal largeneſs; then the light, nimble, ſwift, ſlender Dog, which is bred in the North parts of this Land, as *Yorkſhire*, *Cumberland*, *Northumberland*, and many other plain Champion Countries: And laſtly, the little *Beagle*, which may be carried in a mans glove, and are bred in many Countries for delight only, being of curious ſcents and paſſing cunning in their hunting; for the moſt part tyring, (but ſeldome killing) the prey, except at ſome ſtrange advantage.

Theſe Hounds are of divers colours, and according to their colours, ſo we elect them for the chaſe: As thus for example; The white Hound, or the white with black ſpots, or the white with ſome few liver ſpots, are the moſt principal, both to compoſe your Kennel of, and will indeed hunt any chaſe exceeding well, eſpecially the Hare, Stag, Buck, Roe, or Otter; for they will well endure both woods and waters: yet if you demand which is the beſt and moſt beautiful of all colours, for the general Kennel, then I anſwer, The white with the black ears, and a black ſpot at the ſetting on of the tayl, and are ever found both of good ſcent, and good condition. The black hound, the black tann'd, or he that is all liver hew'd, or the milk white, which is the true Talbots, are beſt for the ſtring or line, for they do delight moſt in blood, and have a natural inclination to hunt dry foot; and of theſe the largeſt is ever beſt, and moſt comely. The griſſel'd, which are ever moſt commonly ſhag-hair'd or any other colour, whether it be mixt or unmixt, ſo it be ſhag-hair'd, are the beſt verminers, and therefore are choſen to hunt the Fox, Badger, or any other hot ſcents: they are exceeding good and cunning finders: and therefore have Huntſmen thought not amiſs to have one, or a couple in every Kennel.

The ſhape and proportion of Hounds.

For the ſhape of your Hound, it muſt be according to the Climate where he is bred, and according to the natural compoſition

position of his body, as thus: If you would choose a large, heavy, slow, true, Talbot like Hound, you must choose him which hath a round, big, thick head, with a short nose uprising, and large open nostrils, which shews that he is of a good and quick scent, his ears exceeding large, thin, and down hanging much lower then his chaps, and the flews of his upper lips almost two inches lower then his neither chaps, which shews a merry deep mouth, and a loud ringer, his back strong and streight, yet rather rising, then inwardly yielding, which shewes much toughness and indurance; his fillets will be thick and great, which approves a quick gathering up of his legs without pain, his huckle bones round and hidden, which shews he will not tire, his Thighs round, and his Hams streight, which shews swiftness; his tail long, and rush grown, that is big at the setting on, and small downward, which shewes a perfect strong chine, and a good wind; the hair under his belly hard and stiffe, which shewes willingness and ability to endure labour in all weathers, and in all places; his legs large and lean which shews nimbleness in leaping or climbing, his foot round, high knuckled and well clawd, with a dry hard soal, which shews he will never surbait; and the general composure of his body so just and even, that no level may distinguish whether his hinder or fore part be the higher: all which shew him of much ability, and that in his labour he will seldome find any annoyance. But if you will choose a swift light Hound, then must his head be more slender, and his nose more long, his ears & flews more shallow, his back broad, his belly gaunt, his tail small, his joynts long, his foot round, and his general composure much more slender, and Gray Hound-like: and thus in the generality for the most part, are all your *Yorkshire* Hounds, whose vertues I can praise no further then for scent and swiftness: for to speake of their mouths they have only a little sharp sweetness like Gig, but no depth or ground like more solemn musick.

Now to speak of the composition of Kennels, though there is a most certain known better hood, yet it is to men like beauty each allowing best of that which agrees with his own affection, therefore when you intend to set up a Kennel of Hounds, examine your fancy what be the best pleasures you take in The composition of kennel.

Hounds, whether it be cunning in hunting, ſweetneſs, loudneſs or deepneſs of cry; whether it be for the training of your Horſe, or elſe but meerly for the exerciſe of your own body, being otherwiſe ſubject to groſsneſs and infirmity: If it be for cunning hunting, you ſhall breed your dogs from the ſloweſt and largeſt of the Northern Hounds, and the ſwifteſt and ſlendreſt of the Weſt countrey Hounds, being both Male and Female, approved to be ſtaunch, fair, and even-running, of perfect fine ſcent, and not given to lye off, or look for advantages. Theſe Hounds will neither be ſo exceeding ſlow, that you will waſte many dayes without ſome Fruit of your labour, or ſo unnimble, that you ſhall need men to help them over every hedge, as I have many times ſeen, to my much wonder; but having both ſtrength and nimbleneſs, will hold you in continual delight and exerciſe; for theſe middle ſiz'd dogs are neither ſo ſwift that they will far out-run the ſcent, and ſo fetch many tedious rings to recover it; nor ſo ſlow, that for want of ſpeed they will looſe the ſcent, and let it grow cold by their own lazineſs, but being ever and anon upon it, bring Chaſe to ſuch a narrow exigent, that the poor Beaſt ſhall be forc'd to try all the Skill, nature or ſtrength hath lent it, to preſerve life: and the Hounds on the other ſide, all their pains, and the Huntſman cunning, to undoe intricate doubles, Skips, Squats and windings with which they ſhall be perplexed; and in this mediocrity of hunting, ſhall your eye (if the covert be not too extream thick) take a perfect veiw of all the art and cunning in every paſſage, ſo that I conclude the middle ſized Hound, of good ſtrength, ſound mouth, and reaſonable ſpeed, which will make a Horſe gallop faſt, and not run, is the beſt for the true Art and uſe of hunting.

The middle-ſiz'd dog for running.

If you would have your Kennel for ſweetneſs of cry, then you muſt compound it of ſome large dogs, that have deep ſolemn Mouthes, and are ſwift in ſpending, which muſt as it were bear the baſe in the conſort; then a double number of roaring, and loud ringing Mouthes, which muſt bear the counter tenor; then ſome hollow plain ſweet Mouthes, which muſt bear the mean or middle part: and ſo with theſe three parts of Muſick you ſhall make your cry perfect: and herein you ſhall obſerve that theſe Hounds thus mixt, do run juſt and even together,

For ſweetneſs of cry.

and

and not hang off looſe from one another, which is the vileſt ſight that may be; and you ſhall underſtand, that this compoſition is beſt to be made of the ſwifteſt and largeſt deep mouthed dog, the ſloweſt middle ſiz'd dog, and the ſhorteſt legg'd ſlender dog, amongſt theſe you may caſt in a couple or two ſmall ſingle beagles. which as ſmall trebles may warble amongſt them: the cry will be a great deal the more ſweet.

If you would have your Kennel for loudneſs of Mouth, you ſhall not then chooſe the hollow deep Mouth, but the loud clanging Mouth, which ſpendeth freely and ſharply, and as it were redoubleth in utterance: and if you mix with them the Mouth that roareth, and the mouth that whineth, the cry will be both the louder and the ſmarter; and theſe Hounds are for the moſt part of the middle ſize, neither extream tall, nor extream deep flewed, ſuch as for the moſt part your *Shrop-ſhire*, and pure *Worceſter-ſhire* dogs are, and the more equally you compound theſe mouths, having as many Roarers as Spenders, and as many whiners, as of either of the other, the lowder and pleaſanter your cry will be, eſpecially if it be in ſounding tall woods, or under the eccho of Rocks. For loudneſs of cry.

If you would have your Kennel for depth of mouth; then you ſhall compound it of the largeſt dogs which have the greateſt mouths and deepeſt flews, ſuch as your *Weſt Countrey*, *Che-ſhire* and *Lanca-ſhire* dogs are, and to five or ſix baſe couple of mouths ſhall not add above two couple of Counter tenors, as many means and not above one couple of Roarers, which being heard but now and then, as at the opening or hitting of a ſcent, will give much ſweetneſs to the ſolemneſs, and graveneſs of the cry, and the muſick thereof will be much more delightfull to the ears of every beholder. For deepneſs of cry.

If you would have your Kennel for training of your Horſe only, labouring thereby to bring him to the full perfection of ſpeed, truth and roughneſs, then you ſhall compound your Kennel of the lighteſt, nimbleſt, and ſwifteſt dogs, ſuch as for the moſt part all your Northern Hounds are, which running ſwiftly away with the chaſe, will draw your Horſe up to that extraordinary ſpeed, that he will forget all eaſe or loitering, and acquaint himſelf dayly with the violence of ſuch excerciſe, being ſo familiar For training Horſes.

familiar therewith; that in the end it will be leſs troubleſome to him then a ſlow gallop: and hence it was and is, that the North parts, are ſo famous for the truth and ſwiftneſs of their Horſes, above all other Countries in this Kingdome; for it is moſt certain that their Horſes are not better bred there, then in other places, but their exerciſe is much ſtronger, and violent through the natural ſwiftneſs of their Hounds, inſomuch, that unleſs a Horſe either out of nature or education, be brought to a more then ordinary ſpeed, it is impoſſible that his maſter ſhould either ſee ſport, or keep company with his companions.

A good caveat for Gentlemen.

Therefore I would have all young Gentlemen, which are addicted to the delight of hunting or running Horſes, by all means to train them up after the ſwifteſt Hounds: for it is the greateſt deceit and couſenage a man can beſtow upon himſelf, to do the contrary, as I have ſeen many times in my own experience, when a Gentleman who hath ſuppoſed his Hounds to be ſwift, which indeed were but of a middle ſpeed, and hath ſeen his Horſe follow them all dayly, luſtily and ſtrongly, in every Chaſe able to command the formoſt Hound at his pleaſure, he hath immediately in his own judgment concluded his Horſe ſwift and matchable with the beſt, and from that opinion ingaged him againſt a known ſwift Horſe, for great ſummes of money: then when the day of tryal, hath been come, the Horſe which had been trained after ſlow dogs, coming to follow thoſe that were indeed ſwift, hath been drawn ſo far beyond the uſual manner of former exerciſe, that he hath given over the Chaſe before the day hath been half ſpent.

This caveat I give for all mens inſtructions, becauſe I have ſeen the loſs which hath grown thereby. And now to return to my purpoſe; your Kennel thus compoſed of the ſwifteſt Hounds, you ſhall as nigh as you can, ſort their mouths into three equal parts of muſick, that is to ſay, Baſe, Counter-tenor, and mean; the Baſe are thoſe mouths which are moſt deep and ſolemn, and are ſpent out plain and freely, without redoubling: the Counter-tenour are thoſe which are moſt loud and ringing, whoſe ſharp ſounds paſs ſo ſwift, that they ſeem to dole and make diviſion; and the mean are thoſe which are ſoft ſweet mouthes, that though plain, and a little hollow, yet are ſpent

ſmooth

ſmooth and freely; yet ſo diſtinctly, that a man may count the notes as they open. Of theſe three ſorts of mouths if your Kennel be (as near as you can) equally compounded, you ſhall find it moſt perfect and delectable: for though they have not the thunder and loudneſs of the great dogs, which may be compared to the high wind-inſtruments, yet they will have the tunable ſweetneſs of the beſt compounded conſorts; and ſure a man may find as much Art and delight in a Lute, as in an Organ. But here me thinks, a too tender lover of a Horſe ſtands at my elbow, and pulls me by the ear with this Objection, that to train Horſes after dogs of this exceeding ſwiftneſs, will be a labour of that violence, which a young Horſe will hardly endure: For firſt it will draw him ſo ſuddenly from his wind, that it will breed ſtopping in his body, and choaking up the paſſage of his breath, hazard the breaking of his Lungs, or the rimme of his belly, as hath been many times ſeen in Horſes of great mettal: Next, the horſe being young and unacquainted with exerciſe, it will breed in him a wearineſs and loathing of his labour, and nothing is well done that it is not done with delight; Laſtly, the Horſe being foul of body, and unpurged, it may melt his greaſe too ſoon, ſtrain his ſinews and tender griſtles too much, and breed many diſeaſes foul and incurable, of which only too violent labour is the groundwork.

Objections againſt ſwift Hounds.

To this objection I thus anſwer, that albeit the labour be for the time moſt violent, yet it is not of ſo long continuance as that which is more ſlow; and to run twelve ſcore ſwiftly, is not ſo painful, as to walk twenty miles, for you muſt underſtand that theſe ſwift Hounds out of their metal and ſwiftneſs do ſoon overſhoot and runne beyond the ſcent, and then retiring back upon it again, give the Horſe time to eaſe himſelf, and catch new breath; whereas the ſlower dogs carrying the ſcent ever before them, keep your Horſe to a continual labour, which is more painful, and makes him a tough enduring Lackey, but not a moſt ſwift running Gentleman: beſides, the many faults and caſtings about of the ſwift dogs, add ſuch a comfort unto the Horſe, who perceiveth the ſtrength of his labour to have no eaſe till he come up to thoſe faults, that he will out of the willingneſs of his own nature, double his courage to purſue the moſt ſwift-

The anſwer.

swift, seeing his ease is ever the greater, by how much he keepeth ever nearer to the Hounds. For the danger of bursting, melting his grease, and other infirmities, the discretion of the Rider, and Skill of the Keeper must prevent, of whose Offices I have written largely in former Chapters in the Book called *Cheap* and *Good*: for be assured, those dangers may happen as well after the slowest dogs, as the swiftest.

Correction of swift Hounds haste.

But to my purpose, since Hounds are the subject of my discourse: You shall understand that these swift Hounds are, as is before said, out of their haste, nimbleness and mettal, more subject to make defaults then other Hounds, yet full as curious and good of scent as any other, as you shall perceive by the quick knowledge and apprehension of their own errors, casting about of themselves, and recovering the scent, and so going away with the same, before any Huntsman can come in to help them: yet I would wish every Gentleman-like husband-man, in the composition of this Kennel, to have some staunch old dogs amongst them, which running more soberly, yet close with them, may sit upon the scent, when they overshoot it; and so call them back, and give them their loss without more trouble. Also I would have both in this Kennel, and every other, a couple at least of good finders, being dogs staunch of mouth, and not able to open, except they lie upon a certain trayle; for these will be great furtherers of your sport, and make your younger dogs a great deal more mute and painful.

Of the high-way Hounds.

You shall also in this, and all other Kennels, have at least a couple of good high-way dogs, that is to say, Hounds of such cunning and perfect scent, that they will hunt as well upon a dry, hard, high-way (where you cannot pick forth passage of your Chase) as upon the freshest mould, or will hunt as truly through Flocks of Sheep or heards of Beasts, as upon the grounds where few or no Beasts come, these are called Hounds for the high-way or guides of the Kennel, and are exceeding necessary, and fit for all mens pleasure: for they take from the huntsman, both sence of pain, and anger.

The kennel for exercise of body.

Lastly, if you would compose a Kennel only for the exercise of your own body, or maintenance of health, you shall first draw into consideration your own ability, as whether you

you will make your exercise on foot, or horse back. If your delight and ability draw you to hunt on foot, then I would wish you to compose your Kennel of the biggest and slowest dogs you can get, respecting only cunning hunting, and depth of Mouth; and this Kennel that you make so staunch and obedient to your command, that when they are upon the hottest scent, or in the earnestness of the chase, to step before them, and cast your hunting pole but before their eyes, they shall suddenly stop, and hunt after you in full cry; with no more speed then it shall please you to lead them; and then when you please, to let them go before you again, to pass away with the scent roundly, and without stay.

This manner of hunting will carry with it a twofold delight, the one of enjoying the musick of their voices, the other the cunning of their Noses: each striving to go before, yet none presuming without leave to go before; by this rule you shall bring the hottest scent, and coldest scent to one manner of swiftness, and so neither offend your body with too much nor too little exercise. But if you will take your exercise on Horse-back, because infirmity will not let you run a foot, then you shall compose your Kennel of the slowest, or middle sized Hounds, who shall have both good mouths, and loud, and noses of the most ready scent, and perfect hunting: and if you bring these Hounds also to the former obedience of stopping and hunting after you, it will be exceeding good and delightful, both to your eyes, and ears, and so bring your Hounds to temperance and coolness in hunting, that taking the Frensie and greediness of haste from their minds, they will make your sport much longer, and less weary, then else it would be.

But some will answer me, that albeit they have infirmities, which detaine them from running afoot, or labouring like Lackies or Drudges, yet they can endure ordinary and orderly walking, such as shall be fit for any moderate exercise; and therefore would hunt on foot: yet the great Hound they like not for two causes; first he is chargeable & troublesome in keeping & next his noisomness and pestering company in a house that is but streight, and of no more then of necessary use. To these I answer, that it is good for them to keep the little small Mitten-Beagle

which

which may be companion for a Ladies Kirtle, and in the field will hunt as cunningly as any hound whatsoever only their musick is very small, like reeds and their pace like their body: only for exercise, and not for slaughter.

Of the hounds kennel.

Having thus composed your Kennel of hounds according to the humor of your own fancy and delight, it shall be meet then that you frame a Kennell or house to keep them in, wherein they may lie dry, and have their food and other necessaries about them, without troubling your dwelling house, or giving offence by their greedinesse and ravening.

The situation of the kennel.

This Kennel for hounds, would be placed a pretty distance from your dwelling house, near some river, pond, spring, or other fresh water: it would also stand against the side of some bank or hill, which looking directly against the East, the morning Sun might rise upon the same, and not lose the sight of it till at least two or three hours after noon, which will be a great refreshing and comfort unto the hounds, which love naturally to stretch them, and pick themselves in the Sun: against the side of this hill, would be cut or digged, divers large and broad seats one above another, containing at least five foot in breadth, and two foot and a half in heigth, which seats would be either boarded or watled with stakes and small wands on the sides, to hold up the earth from falling, and also close boarded aloft; whereon you shall lay fresh and sweet straw for your dogs to lye upon: the number of these seats would be according to the number of your hounds and the quality of the earth in largenesse: over these seats would be made a close and well tiled shed, open to no way but upon the East, and in such manner that it may defend either all or most part of the seats from rain, wind or any tempest: from the lowest part of these seats forward, you shall make a large green court, being either walled, paled; or otherwise very strongly fenced about, in which your hounds may play, sport, scummer, and do other offices of nature fit for their health: also in this court, in the most convenient corner of the same, you shall build a little house or lodge, with a spacious and largechimney in the same, wherein in the winter time you shall allow fire, before which your dogs returned (from hunting) may stretch, pick, dry and trim themselves, which is an exceeding

ing comfort unto them, and will make them more ſtrong and able to endure their Labour, and alſo keep them wonderfully well both from the mangy and other filthy diſeaſes which proceed from colds taken after violent heating. In this Chimny, your Huntſman ſhall have a large Cauldron, and other neceſſaries, as Ladles, Skummers, and ſuch like; for preparing and making ready of all ſuch warm meat as you ſhall allow to them, which if it be ſweet is called the Mange: if otherwiſe, Carrion or Garbage: above this lower Room ſhall be your Huntſmans Lodging, wherein he ſhall alſo keep his Couples, Liams, Collars, Traſhes, Boxes & Pots with Salves and Oyntments, for the cure of ſuch infirmities as ſhall happen amongſt them, and all other neceſſaries any way belonging to his office. In another part of the court, and neereſt unto the houſe, you ſhall place Troughs and Tubs, ſome for their meat, and ſome for ſweet Water; all which muſt be kept very neat and clean; and Water muſt by no means at any time be wanting, yet oft renewed, and the veſſels ſcowred for ſweetneſs ſake, for the Huntſman ought to hold it for a Rule, that nothing bringeth more health than cleanlineſs. Into this Kennel you ſhall by no means bring at any time Carrion, becauſe it will make the place unſavory, and unfit for any Man of worth to look into, and ſure it ought to be a place fit for every worthy Eye.

Now your Kennel being thus orderly, and well prepared, it is meet that I ſhew what meat is meeteſt for Hounds; how it ſhall be prepared, and how they ſhall be fed. Firſt then, intending that I only ſpeak of hunting Hounds, that is to ſay, Hounds which are in continual uſe & action, you ſhall underſtand that in their days of reſt, the ſtrongeſt and luſtieſt meat you can give them both for raiſing them up when they are low hunted, or for keeping them in ſtrength when they have luſt within them, is either horſe-fleſh newly ſlain and warm at the feeding, the intrals and garbage of Beaſts (Lungs only excepted) or the heads, plucks, and bowels of Sheep, or generally any Carrion which is not old, nor cold after the death. To feed them for perfectneſs of hunting, and to keep their ſcents fine, pure and clean, or to purge the ſtench of the carrion out of their noſes, that thereby they may undergoe the work with more cunning, the beſt food is to give them Of Hounds.

Mange, made either of ground Oats, Barley Meale, Branne, or Mill-duſt, well ſcalded and boyled together, or any of theſe two mixt together and ſcalded with beef broth, or any other broth in which fleſh hath been ſodden, ſo as it be not too extream Salt.

Now for the uſe and manner of feeding with theſe meats (as I ſaid before) horſe-fleſh, garbage, and other carrion is only to breed ſtrength, and luſt in a hound, and is to be given only when a hound reſteth; becauſe the ſtrength and ſmell of the ſame will ſo cloy and ſtop the hounds noſtrils, that he can hardly diſtinguiſh, or undertake any finer ſcent, and ſo breed much hindrance to his hunting: Therefore you ought ever to feed your hounds at leaſt the day before you hunt, if not more, with ſweet meat.

Now for the manner of feeding with horſe-fleſh, or any other carrion, you ſhall be ſure to have it a good diſtance from your Kennel, and ſo as it may be no annoyance either to your own Neighbours, or travellers in the high Way; then firſt before your Hounds touch it, with your Knife take of the Skin, then open the body, take out the bowels and rip them; then, if the body be more then either hounds can, or muſt eat, take off a Leg, or a Shoulder; or ſuch part as you think fitteſt to preſerve, and lay it by; then let your hounds feed on the reſt, till their bodies be well filled: which done draw your hounds home and upon ſome ſtange for the purpoſe, carry with you that which you ſaved; which as ſoon as you have ſhut up your hounds, you ſhall bear to the River, or freſh Water, and lay it in the ſame until you have occaſion to uſe it; for it will keep it ſweet a week or more at leaſt, if need require.

Now for feeding with Mange, or ſweet meat, it would ever be done the day before you hunt, and as it is to be prepared in the Kennel, ſo you ſhall let them eat it in troughs, within the Kennel, for that will make them take delight in the place; and this Mange muſt ever be given warm, and made ſomewhat thick, and if you white it over with milk, or Butter milk; and if you caſt into it chippings, cruſts of bread, bones, broken meat, or ſcraping of trenchers, it will be better, and they will eat it with more greedineſs.

If

If you have Hounds that are poor, weak or sickly, which you would suddenly recover and bring unto hunting: Then if you take Sheeps heads, Wooll and all, and hack, hew and bruise them in many pieces; then boyl them with Oatmeal and Penny-royal and make strong pottage of the same, and give all together warm to your sick Hounds, and it will suddenly recover them; if once in a week also you give them a full meal of warm horse-flesh, it is very soveraign. Meat for sick and weak Hounds.

Now for the best times of feeding, it is held amongst all our best experienc't Huntsmen, to be in the days of rest, early in the morning before Sun rise, and in the Evening at the Sun set: But in the days of hunting, you shall let them go fasting out of the Kennel and feed them as soon as you come home to the Kennel or before in your way homeward, if you have any horse-flesh, or other Carrion readily provided: otherwise with such meat as you have, so it will fill their bellies; for a Hound by no means would be pinched of his belly after his labour, and therefore be sure if your meat be course to fill his guts well, if it be sweet, strong and comfortable, then less will serve him. Best hours of feeding.

And here I think it meet to speak of a convenient proportion of Food, for the maintenance of a Kennel of good hounds: Wherein you shall understand that three bushels of Oats or Barley-meal, with half so much Branne or Mill dust, is a fit weekly proportion to keep nine or ten couple of Hounds; with a little help of horse-flesh, if the Huntsman be any good Husband, and painful as ought to be in finding out Horses, scraps, crusts and bones which almost abound in every mans house of any worth or reckoning and by imploying that which is saved in the days of labour to increase the proportion when need shall require: Many much larger quantities I have known, and do know allowed this day in divers places; but I have held it an abuse to the Master and either a covetousness or negligence in the Huntsman, by whose unskilful greediness, I have seen many tyred out of the pleasures, Therefore be assured this quantity already named, will fully suffice, nay, even to please a most wanton curiosity; and surely much less, if a painful Huntsman have the government: for I shall never see fairer or better kept Hounds, then I have seen maintained with half this proportion; but as I would not be too A proportion of meat.

laviſh in my directions, ſo I would much leſs be too ſtrait handed, hoping that every man of honeſty and truſt will order his affairs with diſcretion.

Ordering of Hounds after hunting.

Now for the ordering of your Hounds after they have done hunting, you ſhall, if you feed them abroad or otherwiſe, as ſoon as you bring them into the Kennel, waſh all their feet either with a little warm Butter and Beer, Beef broth or Water wherein Mallows and Nettles have been boyled ſoft and tender, you ſhall pick every cley, and ſearch the foot for Thorns, Stubs, or any other pricklings; you ſhall look that the ſtraw whereon they lye, be ſweet and freſh; and if it be in the ſtrength of Winter after they are fed, you ſhall ſuffer them for an hour or two to beak and ſtretch themſelves before the fire, ere they go to lye down for all night, and by no means trouble them as long as they lick, pick or trim themſelves; but that once finiſhed, you ſhall force them from the fire, and make them find out their Lodgings.

CHAP. II.

The curing of all manner of infirmities in Hounds.

NExt unto theſe precepts, it is meet you be skilful in curing of all the diſeaſes in Hounds, of which as there be many ſo here you ſhall partake many rules for the ſame, both perfect, and excellently approved by late experience. And firſt of all, in as much as it is an infirmity of all other moſt general, natural, and as it were not to be divided from Dogs, I will begin with the killing of fleas and lice, and ſuch like vermine in Hounds which proceeds from filthy keeping, rotten and moiſt lodging, and want of ſhifting of ſtraw when it growes ſhort by much lying on: if then your Hound be troubled with fleas or lice, you ſhall take Rue or herb of Grace four or five handfuls, and boyl it in a gallon of running water till a pottle be full conſumed, then ſtrain it through a courſe cloath, and put to it two ounces of ſtrong *Staveſaker* beaten to powder, and being warm, bath your Hound therewith and it will deſtroy them.

Of killing fleas and lice.

To kill worms.

If your Hound be troubled with worms, which is very general amongſt them, eſpecially the young Hounds, then you ſhall take a pint of new milk and mix it with a good quantity

tity of Brimſtone, and ſo give it luke-warm unto the Hound, and it will not only ſcowr away all manner of wormes, but all other filthineſs bred in the body of a Hound, either by labour or ſurfeit.

If your Dogge have been bitten by either Snake, Adder, or any other venemous thing, take the herb Calaminth, and beat it in a mortar, with Turpentine and yellow Wax, till it come to a ſalve, and then apply it to the ſore and it will heal it: Alſo if you boyl the herb in milk, and give the dog it to drink, it will expel all inward poyſon. Biting with venomous Beaſts.

If your Hound have been bitten with a mad Dogge, which is a diſeaſe exceeding dangerous and mortal, you ſhall preſently waſh the place ſo bitten with Sea water or a very ſtrong brine, and it will ſave and cure him; or elſe take the herb called Yarrow, and beat a handful thereof in a mortar, with a handful of Wheat till it come to a ſalve, and then lay it to the ſore, and it will heal it: and if you pour into his ſtomach as much Mithridate as a hazel nut, diſſolved in ſweet Wine, it will wonderfully ſcour and preſerve him from the infection of the inward poyſon. Biting with a mad dog.

The infirmity of madneſs it ſelf in Doggs, is common and oft to be ſeen, and though it be altogether incurable, yet if a man be experienced in the firſt ſigns or characters of madneſs, he may prevent divers miſcheifs, and moſt mortal evils, which enſue for want of ſuch knowledge, and albeit he loſe one Dogge, yet he may ſave all the reſt: the firſt ſign therefore to know when a Dogge is entring into this diſeaſe, is a melancholy ſeparating himſelf from other Dogges, and walking up and down alone, oft caſting up his head into the Wind, and looking upward, his tayle at the ſetting on, riſing upward, and the reſt hanging down, his Mouth will foam and be full of ſlaver or white froth, as he runneth up and down he will haſtily ſnatch at every thing that he meeteth with, yet, but only give one ſnatch and away, his eyes will be red and more fiery then other Doggs, and his breath will be ſtrong and of a filthy ſavour: any of theſe ſigns when you ſhall perceive, you ſhall preſently ſeparate him from other Doggs and kill him, for unto the diſeaſe is no cure. Of a mad dog and the ſigns.

If your Hound be gauld, or his Skinne torn in any part, you ſhall Of Gauling.

shall only take *May* butter, yellow Waxe, and a little unslackt Lime beaten together like a salve, therewith anoint the sore place and it is a present cure.

Of a Tetter. If your Hound (as they are much incident thereunto) have any Tetter or dry Scab, you shall take of black Ink, the juyce of Mints and Vinegar of each alike quantity, and mix them together with the powder of Brimstone till it be thick like a salve, and then anoint the Tetter therewith till it bleed, and it will soon kill and cure it.

For the Itch. If your Hound be troubled with the Itch, you shall take Nerv-oyl, and beat it with quick-silver till the quick-silver be kill'd, and the salve turned to a pale yellow colour, then with the same anoint the Dog before a good fire, and chafe it well against the hair and it will cure him.

Of the mangy or scab. But if your Hound be troubled with the Scab or mangy, then you shall take a penny-worth or two of the best Gun-powder you can buy, and mixing it with very strong Wine Vinegar, make it thick like puddle, then with the same anoint all the places where he scratcheth till they bleed, and it will kill the mangy; there be others which do use to cast their Doggs into the Lime-pits of Tanners or Glovers, and force them to swim up and down the same, and it will kill the mangy; yet there must be a great care taken in putting the Dogs in lest, doing it rashly, the Lime water get into their eyes, which is very dangerous, and will hazzard their burning out.

Of Wounds. If your Hound shall receive any Wound, whether it be with sharp or blunt weapon, or any accident whatsoever, although his own Tongue be a soveraign salve, yet if it be in any part, where either he can or will not lick it, the best cure is to wash it with warm Butter and Vinegar mixt together, and then anoint it with a little Venice Turpentine; but if it be a hollow wound, and must of force be tented, then you shall either tent it with sweet Butter and Oat-meal, wrought together to a salve, or with yellow Wax and Deer-suet; there be some that will use for a tent a small candles end, and it is very good if the tallow be sweet, but if it be putrified then it will poyson and corrupt the wound.

Of a Canker in the Ear. If your Hound be troubled with a canker in his ears, which is a grief much incident unto them; you shall first tent the hole

if

if you find any, with dry cork, and after wash the sore with Vinegar and Allom, mixt together, till the flesh look raw, and after dry it with burnt Allom only.

If your Hound be surbaited, you shall wash his feet with Butter and Beer boyled together, and then bind to the soles of his feet young red Nettles, chopt very small, or beaten in a mortar till they come to a salve. Of surbaiting.

For any manner of bruise which shall happen to your Hound, either by rush, spurn, stroke or otherwise, if it appear and swell outwardly, you shall bath the place, with chick-weed and groundsel, boyled in strong Ale dregs till they be soft, and it will allay the swelling: but if the bruise be inward, then you shall with a horn give the Dog a pint of new Milk, and a quarter of an ounce of *Sperma cæti* well mixt together, or for want of *Sperma cæti*, double so much *Stone-pitch* beaten to fine powder. Of Bruise.

If your Hound be troubled with the stone or other filthy matter, which maketh him that he cannot pis, you shall take the seeds of the Herb *Granum solis* or *Gromel*, and bruising them give them to the Hound in half a pint of white Wine. For the stone.

If your Hound (as it is natural to Doggs) be so costive that he can by no means skummer, you shall first take a peice of a tallow candle, about three fingers in length, and thrust it a good way into the tuel of the Hound, and then hold down his tayle hard a quarter of an hour or more, and then give it liberty, and when he hath emptied his belly, you shall give him to drink five or six spoonfulls of Sallet Oyl, and it will clense him sufficiently. For costiveness.

If your Hound be troubled with any disease in his Ears, whether it be a continual running, or any other Imposthumation, you shall take Verjuyce and Chervile Water, and mix them together and each morning and evening drop a spoonful or two thereof into the Dogges Ears, and you shall find it a present Remedy. For any disease in the Ear.

If your Dog at any time be troubled with sore eyes, of what Nature or Quality soever the grief be: you shall take a leafe or two of ground Ivy, and chewing it well in your Mouth, and sucking out the juyce, spit the same into the Doggs eyes morning and evening, and it will cure them. This ground Ivy is a little, round, rough, jaggy leaf, and grows in the bottome of hedges. For sore Eyes.

If

If your Hound ſhall happen to break a legge or any other bone, you ſhall firſt with your hand place it in his true place, and ſee that it ſtand ſtreight and even, then bath it in the warm Oyl of Swallows, or the Oyl of *Mandrake* apples, and wrap it about two or three times, in ſear-cloath made of yellow Wax and Deers ſuet; which done, ſplent it with flat ſplents of wood, and ſo role it with it with a ſtrong roler, and let it ſo reſt nine days at leaſt, before you unſplent it, but remove not the ſear-cloath for fifteen days, and you ſhall ſee the bone will knit ſtrongly and firmly.

CHAP. III.

Of the breeding of all manner of Hounds.

HAving thus paſſed over the election of Hounds, compoſition of Kennels, dieting, and curing of all ſorts of diſeaſes; I hold it meeteſt now to follow with ſome ſhort precepts the breeding of Hounds, becauſe it is exceeding hard, for any man to have a Kennel of Hounds from gift or purchaſe without much imperfection: for though one friend give you a good Hound, another ſells you a good Hound, yet how their goodneſſes will agree when they run together, is very diſputable: and truly unleſs your Hounds have one ſpeed, one tuneableneſs of voyce, and one manner of hunting, your paſtime will be much diſorderly; which there is no way to get ſo eaſily and truly, as by the breeding of your hounds: for one and the ſame birth produceth one and the ſame qualities; therefore having a Hound and a bratch of that ſize, voyce, ſpeed, ſcent, proportion, and general goodneſs which agreeth beſt with your own nature and condition, you ſhall put them together to ingender and breed, either in *January*, *February* or *March*, according as they ſhall grow proud, for thoſe are the three moſt principal moneths in the year for Hounds, bitches or bratches, to be limed in: not but that they may conceive and bring forth as good Whelps in other moneths; but becauſe there will be much loſs of time in the entring of them: for if a bratch be limed in *January*, ſhe will whelp her Litter in *March*, and ſo they will be ready to enter in the firſt beginning of hunting-time: if ſhe be Limed in *February*, ſhe will whelp in *April*, and if ſhe be Limed in *March*

Hounds muſt uſe one another.

The moneths to breed in.

March, she will whelp in *May* following: and in all these three Moneths there is not a dayes loss, for the entring of the whelps; which is an especial care to be observed of Huntsmen.

Also if you shall let your Hounds ingender in the three months aforesaid, you shall not forget to observe as near as you can, that when you put the Dog and Bitch first together, the Moon be either in the sign *Aquarius* or *Gemini*; for it is held amongst the best Hunts-men of this Land, that the whelps which are ingendred under those two signs, will never run mad; and for the most part, the Litter will have at least double so many Dog-whelps, as Bitch Whelps. When your Bitch is near whelping, or hath whelped, you shall separate her from other Hounds, and have a private Kennel for her, where she may be alone without company of other hounds; and you shall duly every night see her kennel'd in the same, that she may take acquaintaince and delight therein; and when you feed her particularly, you shall feed her in that kennel, that taking a love thereto she may not seek out other unfit and unwholesome places to whelp in: for where a Bitch first whelpeth her Litter, if they be removed, she will not leave carrying her Whelps up and down, till she have found the same place again, or some other perhaps more unfit then the former, and such carriage of Whelps by the Dam is very ill and dangerous: this kennel where your Whelps shall remain, shall not be kept close, but open, that the Bitch may have liberty to go up and down after twenty four hours space, which time she shall be kept very well, close and warm, that she may perform the natural office of a Dam to her Whelps.

Under which signs to breed.

Ordering of Bitches after Whelping.

You shall not suffer your Whelps to suck above two moneths at the most, but then you shall Wean them, and if the house you keep be of great receit and many servants, you shall let your Cook bring up your best Whelps, and your Dairy-maid your second best, and the rest you shall put forth amongst your friends, or Tenants, according unto the love you possess in the Countrey.

When to weap Whelps.

Now when your Whelps are brought up, you shall not enter them into hunting before they be at least a year and half old, as

When to enter Whelps.

thus, if your Whelps were whelpt in *March*, then you ſhall not enter them until *September* come twelve moneths after: and if they were whelpt in *April*, then you ſhall enter them in *October* come twelve moneths after. And ſo forth, for the reſt of the moneths.

How to enter Whelps.

Now for the manner of your entring of Whelps, you ſhall draw them abroad in the pleaſanteſt of the day, with the moſt ſtaunch and beſt hunting Hounds you have, leaving at home all babling and flying Curs; and if you can, you ſhall have your Hare ready ſet before you come, (for the Hare is the principal chaſe you can enter Whelps upon) and then putting her from her form, and veiwing perfectly which way ſhe taketh, after the ſcent is a little cooled, lay on your Hounds, and give them all the advantages you can for the hunting of her, as by wind, veiw, hollow, or pricking her paſſage: and if they ſhall chance to kill her; you ſhall immediately take her from the Hounds, and not ſuffer them to break her, for it is an evil cuſtome, but your ſelf ſtripping away the Skin, ſhall cut her all to pieces, and give every part of her to your young Whelps, which will breed in them great courage and delight in hunting.

Obſervations in the entring of Whelps.

You ſhall obſerve in the entring of your young Whelps, that they hunt fair and even, without advantage, or ſeeking any way to gain eaſe, as by lying off from ſcent, thwarting or croſſing when they are behind to get even with the formoſt Hounds: any of which when you ſhall perceive, you ſhall immediately beat them in with your hunting pole, and compel them to take the ſcent before them: alſo if any of them be giddy headed, and out of mettle will run before the other Hounds clean from the ſcent, in this caſe alſo you ſhall beat them ſoundly back, and bring them back to the ſcent, and force them to take it with the reſt of the Kennel. Alſo if any young Hound will not ſtrike upon a default but run babling away without the ſcent, drawing away the reſt of the Kennel to follow him; in this caſe alſo you ſhall ſcourge him back, and compel him to ſtand and labour upon the default, till ſome of the elder Hounds undertake it, then you ſhall cheriſh all both with horn and voyce into the Chaſe

Laſtly, if you find that any of your young Whelps truſt more

to

to his own scent than to the rest of his fellows, and so by that means hunteth at least twenty foot sometimes behind the rest, making his defaults by his own nose, and not their own leading, yet hunteth very just and true: In this case you shall by no means over-go or over-ride the Whelp, but give him all comfort and encouragement you can, and let him take his own time and leisure, for use and experience will quickly make him Skilful, and the Skill will soon carry him up, among his fellows where hee will soon become a principal Leader: and thus much for Hounds, and the composition of Kennels.

CHAP. IIII.

Of all the several Chases which Hounds are to hunt.

THere hath already (by many well experienced men) been so much written of this Subject, that I know not well what to write, except I should in some sort repeat another mans tale: from which I am so far different (having vowed to my self, by no means to meddle with any thing formerly written) that the strictest examiner whosoever, shall not find me guilty of the least blemish therein: yet since I must necessarily in this case write something, I will as breifly as I can set down some material and special notes, and for the main substance if they desire a long continued circumstance (though this is sufficient for any understanding wit) referre them unto old *Tristram*'s book, translated by Mr. *Turbervile*, and such other Books, where they may find compleat satisfaction.

To speak then first of the Stagge, which is the most Princely and royal Chase of all Chases, and for whom indeed this Art of Hunting was first found out, and invented: he is of all Beasts the goodliest, statelyest, and most manly, and for the use Man, the fullest both of outward and inward profit as in his flesh for the nourishment of Mans body, and in his other Members for helps in Physick: as the bone in his Heart, which is Soveraign for all inward faint sicknesses, for Poyson, the Plague, and hard Travail in women; his blood excellent for all kind of Fluxes, The hunting of the Stagg.

and to make the Skin white and ſmooth; his pizle good for the Co'ick and Bloody-flux; His Horn a moſt ſoveraigne Cordial againſt venome; his ſuet for ſwellings, Gouts and Humors, and his Skin, which is ever a during and Gentlemanly clothing: and of Stags, the oldeſt and greateſt is the beſt.

How to know an old Stag.

The perfect ſign to know an old Stagge by, are theſe; if when you take his view upon the ground, you ſee he hath a large foot, a thick heele, and a deep printing, and open cleft, and a long ſpace; then be aſſured he is old: alſo if his legge be long, and his bone thick, it ſhewes age, beſides your old Sagge doth not over-reach, when your younger Deer doth: alſo you ſhall know his age by his ordure, as thus if it be printed (as it will be from *July* to *Auguſt*) or writhen round, or flat or broad, as it will be in *June*, and therewithal be groſs and fatty, then he is an old Stagge; but if contrarily it be ſmall and dry, then he is but a young Deer: you ſhall know his age by the tines of the hornes, for if he have ten or twelve or fourteen tines, he is a Deer of reaſonable age, but if the beam bee thick and great, then hee is an old Deer; ſo if hee carry but ſome ſix or eight tines, and a ſmall beam, then he is young Deer, and not above three or four years old, for the Red Deer is ſaid the firſt year to have no head, the ſecond but only daggers, and the third tines.

The caſt of Heads.

Stags yearly caſt their Heads in *March*, *April*, *May* or *June*, and in no other moneths, according to the goodneſs of the Soil wherein they feed, for the richeſt ground beareth ever the earlieſt Deer, and a Deer is never ſaid to be in ſeaſon, nor may hee by good rule be hunted till he have caſt his head.

How to find a Deer.

The principal quality in a Husbandman, is, to know how and where to find a Deer; for if he be ignorant in their haunts, hee may wander long, and loſe much labour. Therefore hee ſhall know, that a Red Deer naturally haunteth in *November* amongſt Furrs, Whins or thick Shrubs; In *December* amongſt thick and ſtrong woods. In *January* in Corn-fields of Wheat and Rye, In *February* and *March* amongſt young and thick buſhes; In *April* and *May* in Coppices and Spring; In *June* and *July* in out-woods, and purlews which are neareſt unto green Corn,

and

and in *September* and *October*, after the first showers of rain they go to Rut.

Now when the Huntsman will at any time search any of these places to find his game, hee must bee careful by no means to go downe, but up the wind; for a Deer is of most dainty scent, and upon the least fault will fly and leave his feed: therefore hee must come warily and closely with a quick ear, and a ready eye.

The hunting of the Stag.

Now the best time to find out your Game, is early before Sunne rise, at which time the Deer goeth to his food: from whence you shall watch unto his Leir, and having lodged him, you may returne home and prepare all things for the days hunting; for be assured, except violently compeld, he will not stir until Evening.

Now for the manner of his hunting: you shall first cast off your finders, neer his place of lodging, and after they have hunted him about a ring or two, you shall cast in the rest of your Hounds, and being in full cry and main chase, you shall give them comfort both with horne and sight of the Deer, and take what especial notes or marks you can from him, so that as much as is possible you may know him from any other Deer: then at every default, as soon as the Hounds are in cry again, you shall make in to the hunted Deer, and view him, and if you find it to bee a fresh Deer, you shall rate the Dogs, and bring them back to the default, and there make them cast about again, until they have undertaken the first hunted Deer, then give them comfort by hollowing and Giblets, and so continue the chase till you have either set up the Deer or slain him, ever and anon having a watchful eye unto change: for it is the nature of a Deer, when he is once imbost or weary, to seek where he may find another Deer, and to beat him up and lay himself down in his place.

To know when a Stag is weary.

To know when a Stagge is weary, you shall see him imbost, that is, foaming and slavering about the Mouth with a thick white froath, his Hair will look black, shining and foul with sweat, and hee will tappish off, that is, he will ever and an be lying down and lurking in dark holes and corners, and for his last

Re-

Refuge hee will betake himself to the soyl, which is, hee will leape (if he can) into Rivers, Ponds, or other Water, out of which you shall force him either by art or strength: And thus much for the Chase or hunting of the Stag.

Of the Buck.

Now for the hunting of the Buck: forasmuch as they are most usually kept in parks, and that every Keeper, which is worthy to be a Keeper, may sooner from his own experience then from any Reading, get the experience of the ground he tendeth, and sith hee is bound both by the Laws of Huntsmen and good manners, to give every man contentment, that is priviledged to hunt in his ground: And sith whosoever can hunt a Stag well, cannot hunt a Buck ill, the Red Deer being ever far more curious to hunt, then the Fallow, I will not spend any more time to write of it, but referre you to those Rules which are already Rehersed.

Of the Hare.

Touching the hunting of the Hare, which is every honest Mans, and good Mans chase, and which is indeed the freest, readiest and most induring pastime, and likewise in it's own kind, full of good profit for Mans preservation: For though the Beast be but little, yet are the members worth injoyment, as the flesh, which is good for all manner of Fluxes; the Brains good to make children breed their teeth with ease; the Wool excellent to staunch blood; the Gall soveraign for sore eyes; the blood which will kill Rheum, and Worms; the stifling bone, which being worn, taketh away the pain of the Cramp, with many other good things besides.

Of her profits.

The hunting of the Hare.

Touching the hunting of the Hare, you are first to regard the place of hunting, as whether it bee in Woods or Champain: if in Woods, you shall not cast off your dogs in the thickest of the covert, but rather beat the bush close or shrubby ground near adjoyning to the covert: for though in the Woods you may sooner find a Hare; yet commonly you shall find such change therewithal, that you shall hardly bring any forth worth your pleasure, where, on the contrary part, if you find any in those neighbouring grounds, she will presently fly forth into the champain: becaus naturally a Hare will refuse the covert, till shee begin to be weary; and a Hare being once heated, is not so easily

Where to find hares.

lost,

loſt, upon a freſh change, as when the ſcents are of equal coolneſs. If you hunt in the champain, you ſhall firſt beat thoſe places which are moſt likely, as where Gorſe or Whinnes grow, or in grounds that are all tusks of ruſhes, ſhort ling, bramble buſhes, or ſuch like: or if the champain be more plain and void of ſuch places, then you ſhall at the beginning of the year repair to the ſhrubs, about Chriſtmas to the fallows and in *March* to the green Corn; for thoſe are the moſt uſual haunts for the beſt Hares, and in all theſe places you ſhall regard the Form or Hares ſeat well, and know whether it be old or new, as if the Form be plain and ſmooth within, the pad before it flat and worn, and the pricles ſo new, and eaſie to be ſeen, that the earth appear black, and as it were preſently broken, then is the Form new, and if the Hounds call upon it, then may you hunt from thence, and upon the trail recover that Hare: but if the Form look old and rough within, and the pad it ſelf be not ſmooth, nor any pricks to be diſcerned therein, then it is old, and if the Hounds call upon it, you ſhall rate them, for the ſcent is old, and all the labour will be loſt you ſpend upon it. The knowledg of the Hares Form.

The next thing you obſerve muſt be the ſhifts and ſleights of the Hare, when ſhe is wearily hunted, as her doublings and windings, and at every default give the Hounds leiſure enough and compaſs enough in the caſting about of your rings for the unwinding of the ſame, then you ſhall obſerve her leaps and Skips before ſhe ſquat, and beat all thoſe places very curiouſly which are likely to give her any harbour, and though the loſs ſeem never ſo dangerous, yet not to be diſcouraged, but to continue your ſearch, becauſe when ſhe cometh to thoſe hard ſhifts ſhe is at the laſt caſt, and cannot ſtand long before the Hounds. Many other circumſtances there are, but they are ſo generally known to almoſt every man that any way affecteth this pleaſure, that it is needleſs to make further relation thereof; and therefore I hold this ſufficient for the hunting of the Hare. The Hares ſleights and ſhifts.

Now for the hunting of the Fox or Badger, they are chaſes of a great deal leſs uſe, or cunning then any of the former, becauſe they are of much hotter ſcent, as being intituled ſtinking ſcents and not ſweet ſcents, and indeed very few Dogs but will hunt them with The hunting of the Fox or Badger.

with all eagerneſs; therefore I will not ſtand much upon them, but adviſe you to reſpect well their haunts and coverts, which commonly is in Woods and buſhy places, and to take knowledge of their earths & Kennels, & as near as you can when you go about to hunt them, to ſtop up their Kennels, and keep them out that ſling forth, that they may be ſooner brought to their deſtruction; the chaſe is profitable and pleaſant for the time, inſomuch as there are not ſo many defaults, but a continuing ſport; yet not ſo much deſired as the reſt, becauſe there is not ſo much art and cunning; and thus much for chaſes, and the general uſe of all kind of hunting.

The end of Hunting.

Of Hawking.

CHAP. V.

Of Hawking, with all sorts of Hawks, and the whole Art thereof.

IF your Englisſh Husband-man ſhall for his Recreation, chuſe the pleaſure of Hawking, which is a moſt Princely and ſerious delight; he ſhall underſtand that all Hawks are divided into two kinds, the long winged Hawk, and the ſhort: the long-winged Hawks which are meet for our Husbandmans recreation, are the *Faulcon gentle*, and her *Tercel*; the *Gerfaulcon* and her *Genkin*; the *Saker*, the *Lanner*, the *Barbary Faulcon*, the *Merlin*, and the *Hobby*: and the ſhort winged *Hawks*, are the *Goſhawk*, the *Tercel* of the *Goſhawk*, the *Sparrowhawk*, and the *Musket*. Kinds of Hawks.

The *Faulcon gentle*, which is the principall of *Hawks*, may be made either for the field or river, and will fly at the Partridge, or at the Mallard; the *Gerfaulcon* will flye at the Herron; the Saker at the Crane or Bittern; the *Lanner* will fly at the Partridge, Pheſant or Chooffe; the *Barbary Faulcon* at the Partridge only; the *Merlin* and the *Hobby* at the Lark, or any ſmall Bird whatſoever; the *Goſhawk* or *Tercel* of *Goſhawk*, at the Partridge, Pheſant or Hare; the *Sparrow-hawk* at the Partridge or Black-bird, and the *Musket* at the Buſh only; and all theſe Hawks are hardy, meek, and loving to the man. The flight of Hawks.

The manning of Hawks.

All Hawks generally are manned after one manner, that is to say, by watching and keeping them from sleep, by a continuall carrying them upon your fist, and by a most familiar stroaking and playing with them, with the wing of a dead foul, or such like, and by often gazing and looking them in the face, with a loving and gentle countenance, and so making them acquainted with the man.

Of Luring Hawks.

After your Hawks are manned, you shall bring them to the Lure by easie degrees, as first, making them jump unto the fist, after fall upon the Lure, then come to the voice, and lastly, to know the voice and Lure, so perfectly, that either upon the sound of the one, or sight of the other, she will presently come in, and be most obedient which may easily be performed, by giving her reward when she doth your pleasure, and making her fast when she disobeyeth: short-wing'd hawks shall be called to the fist only, and not to the Lure; neither shall you use unto them, the loudnesse and variety of voice, which you do to the long winged Hawks, but only bring them to the fist by chirping your lips together, or else by the whistle: And in this manner of Luring, and calling of hawks, (for short-winged hawks are said to be called, and not Lured) you shall specially acquaint your hawk with three things: First boldnesse and acquaintance with men, dogs and horses; then that she be eager and sharp set before the Lure be shewed her, knowing both the morning and evening hours of her luring; and lastly, to delight her the more with the Lure, to have it ever garnished on both sides with warm and bloody meat.

The Bathing of Hawks.

When your Hawks are throughly manned and lured, and are come to the height of flesh and good lust, you shall then spy out a fair day when the weather and aire is most temperate, and carry your hawk to some fair, little, shallow, sandy, running brook, or Rundle, where the water is quiet and still, and where your hawk may stand up to the mid thigh therein, and having prickt her down, and made her fast hard by the verdge thereof, you shall take off her hood, and go a little way from her, and see whether she will bathe therein; but if you find her fearful of the water, you shall with a little stick paddle in the water a while before

before her, and then depart from her again, and let her then bathe therein as long as she pleaseth: this done, you shall take her upon your fist, and give her a bit or two of meat, then hold her in the Sun, and let her pick, prune, and dry her self again: if you cannot come to any River, Brook, or Rundle conveniently, then you should provide either a large bason, or a broad, shallow tub, and so in it let your hawk bathe as oft as occasion shall serve, for this bathing giveth a hawk courage, boldnesse and a great appetite, and would commonly be used the day or morning before any flight, If it be in the winter that your hawk batheth, when no Sun shineth, you may then dry her as well by the gentle air of the fire as otherwise.

Of enseaming, giving, casting and scouring.

To enseam your Hawk, which is to cleanse her from grease, fat and glut, which lieth inwardly in her body, and which you shall know by her round thighs, her flesh, and full mewtings; then when you feed her in the morning, give her a bit or two of hot meat, and the night following little or nothing; then morning and evening after, feed her upon the flesh of a Rook washt in two waters, till you feel the pinions of her wings more tender then they were before, then give her casting according to her nature, as was before shewed, and once in two or three dayes give her a hens neck well jointed and washt in water, which will by the sharpnesse thereof break the kels and filmes of fat which are in her body; then every morning you shall give her a quick train Pidgeon, and keep her so long upon her wing, that by her own moderate exercise, she may melt and dissolve the grease that molesteth her, which after it is broken, you may take away, by giving her three or four pellets of the root of Sellandine, as big as garden pease, well washt and scoured; and if you steep those pellets in the syrup of Roses, the scouring is much stronger.

Of flying at the Pheasant or Partridge.

When your Hawk is manned, lured, and enseamed, you shall then bring her to her flight, which if it be at the Pheasant or Partridge in woody and close grounds, then you shall when you lure the hawk, cast your lure into some low Tree or Bush, that thereby you may bring her to take the stand; which when she doth, you shall then draw out your lure, and giving her notice thereof, make her seize thereon, and ever feed her on

the ground, and under a bush, the practice whereof will bring her to delight in the stand, and to mark all the advantages which she shall get from thence; then bringing her to either Pheasant or Partridge, make her fly at a young one first, that being more foolish and easier slain, she may take delight in her conquest. But if you fly any long winged Hawk in the champain, then you shall by all means possible keep her from the stand, and only maintain her upon her wing, till you spring the Partridge underneath her, and then stooping upon the advantage, the prey can hardly escape her: yet for the more sure killing of the game, and entring of young Hawks, you shall first spring the Partridge and mark them, then being come to the mark, cast off your Hawk, and when she is gotten to the height of her gate, lay in your Spannels, and then retriving the Partridge underneath her after the first flight, it is impossible she should escape: And in this sort you may fly all manner of long-winged Hawks, for it is not proper to flie them from the fist, although most of our late Faulconers now adays use it; but for your short-winged Hawks, you shall fly them from the fist only: And therefore to make them hardy and valiant, you shall first enter them at an old field Partridge, laid in a hole, and covered either with a sodde, board or hat, at which you shall fasten a small Creance, and then uncoupling your Spannels, as they are ranging about, suddenly, when your Hawks head is towards the Partridge, pluck off the sodde or hat, and let the train go, and the Hawk after it, which assoon as she hath slain, reward her very well, and thus doing twice or thrice, you may after venter to fly her at your pleasure.

Of flying at fowls.

To make your Hawk fly at fowl, which is called the flight at the River, you shall first whistle off an approved well quarried Hawk that is a sure killer, and let her enew the fowl so long, till she bring it to the plunge: then take her down and reward her, and set her by, yet so as you may have her ready to use at your pleasure, then whistle off your young Hawk, and when she is at the height of her gate, and that you have shewed her water divers times to make her the more inward, and by a gibbet called her in, when at any time she hath looked out. Then being just over the fowl, make in with all your company on every side the River,

River, and so lay forth the fowle, which if your Hawk stoop, strike, and truss, you shall presently make into her, and help her, and then crossing the fowles wing, or breaking them, let your Hawk take her pleasure thereon; but if she do not slay the fowle at the first stooping, then you shall give your Hawk pleasure to recover her gate again, and then lay forth the fowle as before, not leaving thus to do till you have landed it, and that the Hawk hath slain it, and then reward her as aforesaid: But if such a mischeif shall fall out that the fowle do escape and break away; then you shall be sure to have a little Mallard ready in your bag, which you may cast forth, and so reward your Hawk thereon.

Helps for faults in long winged Hawks, and first of the stand.

If your long winged Hawk flying at the River, or in champain fields, use to take stand, which is a foule fault, you shall first by all means shun flying neer Trees or Covert: but if that do not suffice, then you shall have divers trains in divers mens hands, and when the Hawk offers to go to the stand, let him which is next her cast out his train, and she kill it, reward her: this doing once or twice will réclaim her or nothing.

Against forwardness.

If your Hawk through pride of grease or otherwise, be froward and coy, you shall not when she kills, reward her as you were wont, but conveying some other cold meat cunningly under her, let her take her pleasure thereon, and ever with the meat give her some feathers which may scower her, and make her to cast, for this will recover her stomach, and make her more careful and diligent.

To make a hawk look inward.

If your Hawk be of a wild and stirring nature, and will not look inward towards the man with her head, but rake and gase after every check, neither respecting whooping or gibbeting, in this case you must follow her and lure her back, and as soon as she turneth in her head, shew her the lure, to which if she stoop, then presently reward her; and thus do so oft as she rangeth, till she be brought unto that Love to your voyce and affection to the Lure, that she will forget her other extravagant thoughts.

When your Hawk is brought to fly to an extraordinary high pitch, to maintain and keep her in the same manner of flying still, you shall not flie her above one flight in a day at the most; for

for nothing bringeth her down more then over wearineſſe: Alſo you ſhall not then keep too extream a ſtraight hand upon her, for too much greedineſſe of the Quarry makes her ſlacke her flying. Alſo, you ſhall not flie her upon Rundles, or ſmall brooks, but upon plaſhes and broad Rivers; you ſhall not ſuffer her to flie too long, but after two or three ſtoopings, and a croſſing, although ſhe miſſe it, take her down with the Lure or train, and reward her, for this encouragement will maintain her in her goodneſſe.

To bring hawks upward.

If your hawk be high flying, yet ſloathful to go to her Gatte, or elſe now and then ſtooping before there be cauſe, and ſo loſing her way, which many times happeneth when either the hawk is kept too ſharp, or flown out of her due time; any of which faults when you perceive, you ſhall then upon the doing thereof give her a dead Quarry, and then hood her up without reward, and an hour or two after, call her to the Lure, and feed her: and thus do as oft as ſhe offendeth: yet for the more ſure prevention thereof, I would have every Faulconer to try the naturall diſpoſition of his hawk, and find whether ſhe flyeth better on a ſtreight hand, or an open, and whether early or late, and ſo forth, and according to her own nature, ever to keep her.

Faults in ſhort winged hawks, firſt of turning tayl.

Short winged Hawks, as *Goſhawks* and *Sparrow-hawks*, will many times neither kill their Game, nor flie their Game to mark; but will give it over after a little flying, and (as Faulconers term it) turn tail to it, which when you ſee, you ſhall incourage your dogs to hunt and caſt before your hawk a train Partridge, as it were the wild one, and make her ſeize it, and feed well upon it, to encourage her the better; and thus do twice or thrice, which if you ſee it prevail not, then eſteem her not, but make her away, for ſhe will hardly ever be reclaimed.

If a Hawk will not flie at all.

Hawks that have never been acquainted with prey, will many times not flie at all; but taking a tree, will ſit and look after the game, which fault to amend, you ſhall ever feed her upon quick Birds, and make her foot them, and then going into the field, which is champane and plain, after you have rid up and down a pretty ſpace with the hawk unhooded, you ſhall cauſe one of your company to caſt out a field Partridge before your hawk. Then

let

let her flie at it, and so soon as she hath footed it, let her feed thereon at her pleasure, and do thus three or four times, till she be well in blood, and you shall find her valiant quickly.

If your hawk be so fond of the man, that she will not flie from him, but after a stroke or two, return to him again; you must then but seldom be familiar with her, and let her rather feed her selfe then be fed by you, and as oft as she commeth so unproperly unto you, you shall give her no reward; but when she forsaketh you, and killeth the game, then you shall well reward her, and then make her both familiar with men, dogs, and horses; for to take joy or dislike to any of them, is a mischief a great deal worse then the former. Too much fondnesse of the man.

To speak of the mewing of long winged hawks, you shall understand that she may be set down, that is, put into the mew about the middle of *Aprill*, at which time if you find they have any lice, you shall pepper them, and put them into the Mew, which if it be a low place upon the ground free from noise, vermine, or any evill air, then it is called mewing at the stone or stock, but if you mew in any high room with open windowes towards the *North*, or *North-east*, then it is called mewing at large: If you mew at the stock, you shall have a broad Table in the midst of the room, on which you must place sand, gravel, stone, sods, and tubs for water, and in the midst of these a free-stone or block of two foot high, to which you shall fasten your hawk with a turvell of iron, so that at no time her lease may be intangled; this manner of mewing may be in the Faulconers own bed-chamber, or in any other safe room at his pleasure; the best meat in the mew is any quick birds or foul, dogs flesh, and such like: If you mew your hawk at large, you shall put her loose into the mew, having sundry pearches therein, some high, some low for her use to sit on; and in this mew also you shall have sand, stones, gravel, green sods, and water, all which you shall renew as oft as need do require, and in the midst of them a block or two, whereon to tie her meat, which meat shall be the same formerly spoke of, and given at certain and due times, without fail or alteration. Mewing of long winged Hawks. Mewing at the stone. Mewing at large.

If you intend to mew a short winged hawk, as the Goshawk, or such like, you shall in *March* after you have scowred her, and made

made her clean from lice, cut off her the leſſe, and throw her into Mew looſe, either in a high room or a low room at your pleaſure; let her Perches be lined with canvaſſe, or with woollen liſts for the ſafety of her feet, let her have ſtore of water for bathing, and oft renewed, and ſtore of meat, as live Pigeons, warm Mutton, warm Goat, or Dogs-fleſh, any of which will make her mew quickly.

When to draw hawks.

Hawks for the field would be drawn from the mew in *June*, and made ready to flie in *Auguſt*, at which time Corn is cut, and Game is ſtrong: and hawkes for the River would be drawn in *Auguſt*, that they may be ready to flie in *September*.

Diſeaſes in hawks.

Hawkes have divers infirmities and diſeaſes, as Feavers, Palſey, Impoſthumes, ſore eyes, and Nares, Megrims, Pantas, caſting her Gorge, foulneſſe of Gorge, Wormes, Fillanders, ill Liver, or Gout, Pinne in the foot, breaking the pounce, Bones out of joynt, Bones broken, Bruiſes, Lice, Colds, Prounce, Fiſtulaes, Stone, much gaping, more foundring, privy evill, taint in the Feathers, loſs of appetite, broken wind, blow on the Wing, wounds, ſwelling, eating their own feet, taking up of veins in Hawks, Cramp, and a world of others: all which foraſmuch as I have ſhewed the Medicines, and cures thereof in the former Treatiſe called *Cheap and Good*, I will refer you unto the ſame, and not doubt but it will give you ſatisfaction.

CHAP. VI.

Of Courſing with Grey-hounds, and the Excellencies of that ſport.

Of courſing with Grey-hounds.

NOw if the mind of our Husbandman be not ſo generally taken with the delight and pleaſure of this recreation of Hawking, but that he preferreth before it the delight of Courſing with Grey-hounds, which is a very noble and worthy paſtime, he ſhall in it obſerve theſe four things, the Breed of Grey-hounds, their ſhape, their diet, and the Lawes belonging to the ſame.

Breeding of Greyhounds.

Touching the breed of Grey-hounds, you are principally to reſpect the Countries in which they are bred, and nouriſhed

riſhed, as that it be a Champion Plain, and without covert, where a Hare may ſtand forth, and endure a courſe of two miles, or more, as it ſhall happen (for the courſing of a hare is that which I purpoſe moſt to treat of) becauſe in a cloſe Country full of covert, where a hare cannot run above a quarter of a mile, or leſs, both the pleaſure of the recreation is taken away, and the Grey-hound by an inſufficient exerciſe is made unapt, and unfit for that for which he was created.

Now of Champion Countries, they are of three kinds, as the low Valleys, as are the Valleys of *Belvoire*, the Vale of *White Horſe*, the Vale of *Eveſham*, and ſuch like; the high Downs and Heaths, as about *Salisbury*, *Ciceter*, *Lincoln*, and many ſuch like places; and the middle between both, as the Country of *Northampton* and *Leiceſter*, and other like them: All which are very excellent places for the breeding and training up of the beſt Grey-hounds; yet of the three your Valleys or middle ſoyles, which for the moſt part are arable Grounds, are much better to breed and train on, then your Downs and Heaths, becauſe they are much more labourſome, rough, heavy, and in the Winter ſeaſon full of much trouble and falſe root-hold, inſomuch, that a dog which is able to run ſtrongly, ſwiftly, and ſurely there, muſt neceſſarily do it ten times better when he comes to the ſmooth, plain, and carpet-like down: where on the contrary, the dogge which is trained upon thoſe even Downs, though he be right famous and excellent, when he comes to run in the deep well plowed Field, is to ſeek where to beſtow his feet, and can neither ſhew ſpeed, cunning nor endurance.

Beſt places for breed.

The beſt Grey-hounds.

Now the Gentlemen which dwell on the Downs and plain Grounds, to maintain the reputation of their dogs, affirm them to be much more nimble and cunning in turning, then the Vale dogs be, becauſe the fairneſs of the Earth giveth them ſo much advantage over the hare, that having her even (as it were) in a manner under their feet, ſhe is put more to her ſhifts, and ſtrives with greater art of ſleights to deceive, and get advantage of the Grey-hound. And it is true, for by reaſon of the advantage of their Hills, which are great and ſteep, though ſmoothand plain, I have ſeen a Vale-dog ſo much deceived, that upon a turn, he hath loſt more ground then hath been recoverable in the whole

Nimbleneſs in Grey-hounds.

course after: but there is no want of goodness, but a little skill, which a moneths coursing will bring a dog so sufficiently unto, that he will not need any other reformation, then the knowledge of his errour, by his loss of labour. So that I conclude the good dog upon the deeps, will ever beat the good dogs on the plain.

Difference between Doggs and Bitches.

It is an old received opinion amongst many men of the Leash, that the Grey-hound Bitch will ever beat the Grey-hound dog, by reason of her more nimbleness, quickness and agility: And it is sometimes seen, that a perfect good Bitch indeed, hath much advantage of an ordinary dog: but if the good dog meet with the good Bitch, there is then no comparison but the dog will be her Master; in as much as he exceedeth her both in length and strength, the two main helps in coursing; for her nimbleness is then no help; sith a good dog in the turn, will lose as little ground as any bitch whatsoever.

Dogs and Bitches for breed.

Yet thus much I would perswade all Gentlemen of the Leash to be very careful in their breeding, to breed upon the best Bitches they can provide; for it is found in experience, that the best dog upon an indifferent Bitch, will not get so good a whelp, as an indifferent Dog upon the best Bitch. And amongst these Observations in breeding Grey-hounds, you shall observe to have your Dogs and Bitches of equal and indifferent ages, as about three or four years old at the most; but in case of need, your Bitch will endure a great deal longer then your Dog, and to breed with a young dog, or an old bitch, may bring forth an excellent Whelp.

The shapes of Greyhounds.

Touching the shapes of Grey-hounds (from whence you shall take the best collections for their goodnesses) they are certain and most infallible: Therefore touching Grey-hounds, when they are Puppies or young Whelps, those which are most raw-bon'd, lean, loose made, fickle or crooked hought, and generally unknit in every member, are ever likely to make the best dogs, and most shapely: but such as in the first three or four moneths are round, and close trust, fat, streight, and as it were full sum'd and knit in every member, never prove good, swift or comely.

Now after your dog comes to full growth, as at a year and a half, or two years old, he would then have a fine long lean head,

head, with a ſharp noſe, ruſh grown from the Eye downward: A full cleare eye with long Eyelids, a ſharp ear, ſhort and cloſe falling, a long neck a little bending, with a looſe hanging wezand, a broad breaſt, ſtrait forelegs, ſide hollow, ribs ſtraight, a ſquare and flat back, ſhort and ſtrong fillets, a broad ſpace between the Hips, a ſtrong ſtearn or tayl, and a round foot, and good large clefts. Now for the better help of your memory I will give you an old rime left by your fore-Fathers, from which you ſhall underſtand the true ſhapes of a perfect Grey-hound, and this it is.

If you will have a good tike,
Of which there are few like,
He muſt be headed like a ſnake,
Neckt like a Drake,
Backt like a beam,
Sided like a Bream,
Tayled like a Rat,
And footed like a Cat.

Theſe being the principal members of a good Grey-hound, if they reſemble the proportions of the things above named, the dog cannot chooſe but be moſt perfect.

When you have thus a perfect and well ſhap'd Grey-hound, your next rule is to apply your ſelf to the dyeting and ordering of him, for the pleaſure to which you keep him; that bringing him to the uttermoſt height or ſtrength of wind, you may know the uttermoſt goodneſs that is within him, which, diſorderly and foul keeping will conceal, and you loſe a Jewel for want of knowledg of the value. Dyeting of Grey-hounds to courſe.

Dyeting them of Grey-hounds conſiſteth in four eſpecial things, to wit, food, exerciſe, ayring and kennelling; the firſt nouriſhing the Body, the ſecond the Limbs, the third the Wind, and the laſt the Spirits. Of what dieting conſiſteth.

To ſpeak then of food, it is two-fold, either general, or particular; general as for a continual upholding and maintaining of a dog in good ſtate of body, being in good plight and liking; or particular, when a dog is either poor, ſick, or prepared for wa- Of food.

ger, ſtandeth in need of particular foods of advantage.

Of general food.

The beſt general food for the ordinary upholding of a Dog in a good ſtate is, chippings, cruſts of bread, ſoft tender bones or griſſels of Veal, Lamb, or ſuch like, firſt ſcalded in Beef-broth not very ſalt, or other broaths in which hath been boyled Mutton, Veal, or Veniſon, or any kind of Pullen; or for want thereof, other clean ſcalding water. After your chippings or bread is ſcalded, you ſhall let it ſtand and cool, then when your feeding-hour cometh, you ſhall take as much good milk, flotten milk, or butter-milk (but the beſt is moſt wholſome) as will fully or more then whiten the ſame: for it is to be intended, that your water muſt be all drunk up into your bread, and your milk muſt only make it ſwim, and with this feed your dog morning and evening after you come from walking him, and give him a good and ſufficient meal thereof, for this will only maintain and uphold him in good ſtate of body, being ſtrong and luſty in fleſh before.

Of particular food.

For particular food, which is when a dog is poor, ſick, or to be prepared for a wager, they be theſe: Firſt, if he be poor in fleſh, ſickly or weak, the beſt food you can raiſe him up withall, is to take ſheeps heads, wooll and all, clean waſht, and break them all to pieces; then put them into a Cauldron or Kettle, and after the water hath riſen, & is clean ſcum'd, put unto it good ſtore of Oat-meal and ſweet pot-hearbs ſmall chopt together, and ſo boyl it till the fleſh be tender; then with this meat and the pottage feed your Grey-hound morning and evening, and it will ſoon put him into great luſt and ſtrength: but if you will prepare him for match and wager, then you ſhall make him this diet-bread: Take a peck of the fineſt and dryeſt Oatmeal, and two pecks of good Wheat; and having ground them together, boult the meal through a fine boulting cloath, and then ſcattering amongſt it a pretty quantity of Annis-ſeeds and Licoris well beaten together, knead it up with the whites of Eggs, new Ale and Barm mixt together, and ſo bake it in pretty round loaves reaſonable hard: with this bread either ſcalded, as was before ſhewed in your chippings, or put into the pottage with ſheeps heads warm, feed your dog morning and evening, to wit, half an hour after Sun-

Food for a match.

Hours of feeding.

Sun-rise; and half an hour before Sun-set, when you come from walking or airing him, and it will bring him to exceeding great strength of body, and pureneſſe of wind.

Of exercise by courſing.

For the exercise of your Greyhound, it consisteth likewise in two things, courſing and airing; and they be every way as neceſſary as is food, becauſe it only bringeth ability to his limbs, and perfitneſſe to his wind: To speak then of courſing, you ſhall not faile to courſe him at leaſt twice a week, if your courſes be ſtrong and long: but thrice a week if they be but reaſonable, as a mile, or a mile and a half at moſt; and ſometimes if your courſes be ſhort, under a mile. In courſing you ſhall obſerve two things, blood and labour; blood, which is a heartning and animating of your dog to delight in the pleaſure, when he finds the reward of his pains taking; for if a dog courſe continually, and never kill the hare, the ſport will grow irkſome unto him, and therefore now and then give him ſuch advantage, that he may kill the hare: then labour, which is contrary to killing; for in it you muſt give the hare all indifferent advantage both by Law and otherwiſe, whereby ſhe may ſtand long before the dog, and make him ſhew his utter-moſt ſtrength before he be able to reach her.

Of ordering dogs.

After your dog hath courſed, if he kill, you ſhall by no means ſuffer him to break the hare; but having taken her from him, firſt cleanſe his mouth and chaps from the wool of the hare, and then give him to eat, the Liver, Lights, and heart, and ſo take him up in your leaſh, lead him home, and there firſt waſh his feet in a little butter and beer, and ſo put him up in the kennel, and half an hour after feed him: for upon his courſing dayes, you muſt by no means give him any meat more then a white-bread toaſt and butter, or a toaſt and oyle, which muſt be given before his morning ayring, and ſo kennelled till he go to his courſe.

Airing after courſing.

Touching ayring or walking of Grey-hounds, which is a great nouriſher and encreaſer of wind, it muſt duly be done every morning before Sun-riſe, and every evening before or after Sun-ſet, in this manner: as ſoon as you have opened your kennel, and rubb'd your dog over with a clean hair-cloath, you ſhall let him play a little about you, before the kennel door, then take

take him up in your leash and walk him forth in the field, where for the most part are not sheep or other small Cattel, which they may out of wantonness indanger, and there let him loose, and give him leave to play and scope about you, so that he may skummer, piss, and empty his body; which when he hath done sufficiently, you shall then take him up in the leash again, and so walk him home and kennel him; this you shall do after the same manner in the Evening; and also if your Dog be strong and lusty at night after Supper, and then bringing him home bring him to the fire, and there let him stretch and beak himself, and with your hand grope and cleanse him from ticks, and other filth; which done, lead him to the kennel, and shut him up for all night.

Of kennelling the Grey-hound.

Now for the kennelling of Greyhounds, it is a right necessary action, and must be performed with all diligence, for it breeds in dogs, lust, spirit and nimblenesse, prevents divers mischances, and keeps the powers from spending, till time of necessity: and therefore you shall by no means suffer your dog to be out of the kennel, but in the hours of feeding, walking, coursing, or when you have other necessary businesses to do about him.

CHAP. VII.

The Lawes of the Leash or coursing, as they were commanded, allowed, and subscribed by Thomas *late Duke of* Norfolk, *in the Raign of Queen* Elizabeth.

NOw lastly touching the Lawes of the Leash, or coursing, though they be uncertainly received, and alter with mens various opinions, yet these under-written were held for authentical once, and invented, received and subscribed unto by many noble and worthy Personages, suting fully with the Reasons and Grounds of the pastime.

First therefore it was ordered, That he which was chosen Fewterer, or letter-loose of the Grey-hounds, should receive the Grey-hounds match to run together into his Leash, as soon as he came into the field, and to follow next to the Hare-finder till he came unto the Form: and no horsemen nor footman, on pain of disgrace,

disgrace, to go before them, or on either side, but directly behind, the space of forty yards, or thereabouts.

Item, That not above one brace of Grey-hounds do course a Hare at one instant.

Item, That the Hare-finder should give the Hare three sohows before he put her from her Lear, to make the Grey-hounds gaze and attend her rising.

Item, That the Fewterer shall give the Hare twelvescore Law, ere he loose the Grey-hounds, except it be in danger of losing sight.

Item, That dog that giveth the first turn, if after the turn be given, there be neither coat, slip, nor wrench extraordinary, then he which gave the first turn shall be held to win the wager.

Item, If one dog give the first turn, and the other bear the Hare, then he which bore the Hare shall win.

Item, If one dog give both the first turn and last turn, and no other advantage between them, that odde turn shall win the wager.

Item, That a coat shall be more then two turns, and a go-by, or the bearing of the hare, equal with two turns.

Item, If neither dog turn the hare, then he which leadeth last, at the covert, shall be held to win the wager.

Item, If one dog turn the hare, serve himself, and turn her again, those two turns shall be as much as a coat.

Item, If all the course be equal, then he only which bears the hare shall win; and if she be not born, then the course must be adjudged dead.

Item, If he which comes first into the death of the hare, takes her up and saves her from breaking, cherisheth the dogs, and cleanseth their mouths from the wooll, or other filth of the Hare, for such courtesie done, he shall in courtesie challenge the Hare, but not doing it, he shall have no right, priviledge or title therein.

Item, If any dog shall take a fall in the course, and yet perform his part, he shall challenge advantage of a turn more then he giveth.

Item, If one dog turn the Hare, serve himself, and give divers coats, yet in the end stand still in the field, the other dog without

out turn giving, running home to the covert, that dog which ſtood ſtill in the field, ſhall be then adjudged to loſe the wager.

Item, If any man ſhall ride over a dog, and overthrow him in his courſe (though the dog were the worſe dog in opinion) yet the party for the offence, ſhall either receive the diſgrace of the field, or pay the wager; for between the paries, it ſhall be adjudged no courſe.

Item, Thoſe which are choſen Judges of the Leaſh, ſhall give their judgments preſently before they depart from the field, or elſe he, in whoſe default it lyeth, ſhall pay the wager by a general voice and ſentence.

And thus much for the Lawes of Courſing, and thoſe particularities which do depend thereupon: All which, I ſubmit unto the correction and amendment of thoſe Worthy and well-knowing Gentlemen, who having the Office of the Leaſh conferred upon them, have both Authority and Power to make Lawes therein, according unto the Cuſtoms of Countries, and the Rule of Reaſon.

The end of Hunting.

Of

Of Particular Recreations:

CHAP. VIII.

Of divers other particular Recreations.

THere be many other particular Recreations ne- Of shooting in the Long-bow.
ceſſary for the knowledge and practice of our Husbandman; As firſt, Shooting in the Long-bow, which is both healthful for the Body, and neceſſary for the Common-wealth: the firſt, extending the Limbs, and making them pliant: the other, enabling ſtrength fit to preſerve and defend his Country. And firſt, for ſhooting in the Long-bow, a man muſt obſerve theſe few Rules, firſt, that he have a good Eye to behold and diſcern his mark, a knowing judgment to underſtand the diſtance of ground, to take the true advantage of a ſide-wind, and to know in what compaſs his Arrow muſt flye, and a quick dexterity to give his ſhaft a ſtrong, ſharp and ſuddain looſe; he muſt in the action it ſelf ſtand fair, comely, and upright with his body, his Left foot a convenient ſtride before his Right, both his hammes ſtiff, his left Arm holding his Bow in the midſt ſtretcht ſtreight out, and his Right Arm with his three firſt fingers and his thumb drawing the ſtring to his right Ear, the notch of his arrow reſting between his fore-finger, and long finger of his right hand, and the ſteal of his Arrow below the feathers upon the

middle knuckle of his fore-finger on his left hand, he ſhall draw his Arrow up cloſe unto the head and deliver it on the inſtant without hanging on the ſtring; the beſt Bow is either Spaniſh or Engliſh Yew, and the worſt of Witchen or Elme; the beſt ſhaft is of Burch, Sugar-cheſt, or Brazel; and the beſt feathers gray or white.

The Marks to ſhoot at are three, Butts, Pricks, or Rovers: the Butt is a levell Mark, and therefore would have a ſtrong Arrow with a very broad Feather: The Prick is a Mark of ſome compaſſe, yet moſt certain in the diſtance, therefore would have nimble ſtrong Arrows with a middle feather, all of one weight and flying: the Rover is a mark uncertain, ſometimes long, ſometimes ſhort, and therefore muſt have arrows lighter or heavier, according unto the diſtance of place.

Of Shooting in Croſſe-bowes.

If infirmity in the Arm, or Back, take from a man the uſe of the Long-bow, he may then with a Crow-bow made for gafel carried upon a ſtring, and the neather end placed in a reſt, with arrowes made ſtrong, heavy, and ſuitable to the ſtrength of the Bow, ſhoot at all the former Marks, and reap the ſame pleaſure he formerly did with his long bow.

Of bowling.

There is another Recreation, which howſoever unlawfullin the abuſe thereof, yet exerciſed with moderation, is even of Phyſitians themſelves held exceeding wholſome, and hath been preſcribed for a Recreation to great Perſons, and that is bowling, in which a man ſhall find great Art in chooſing out his Ground, and preventing the Winding, Hanging, and many turning advantages of the ſame, whether it be in open wide places, or in cloſe Allies: And in this ſport the chooſing of the Bowl is the greateſt cunning: your flat bowls being the beſt for cloſe Allies: your round byaſſed bowls for open grounds of advantage, and your round bowls like a ball, for green ſwarths that are plain and levell.

Not inferiour to theſe ſports, either for health or action, are the Teniſe, or Baloon; the firſt being a paſtime in cloſe or open Courts, ſtriking a little round ball to and fro, either with the palms of the hand, or with Racket. The other a ſtrong and moving ſport, in the open field, with a great ball of double Leather fill'd

fill'd with wind, and so driven to and fro with the strength of a mans Arm, arm'd in a bracer of wood; either of which actions, must be learnt by the Eye and practice, not by the Ear or Reading.

Of Angling, &c.

CHAP. IX.

The whole Art of Angling; as it was written in a small Treatise in Rime, and now for the better understanding of the Reader put into Prose, and adorned and enlarged. And first of Angling, the Vertue, Use and Antiquity.

SInce Pleasure is a Rapture, or power in this last Age, stoln into the hearts of men, and there lodged up with such a careful guard and attendance, that nothing is more Supream, or ruleth with greater strength in their affections; and since all are now become the Sons of Pleasure, and every good is measured by the delight it produceth: what work unto men can be more thankful then a discourse of that pleasure which is most comely, most honest, and giveth the most liberty to Divine Meditation? and that without all question is the Art of Angling, which having ever been most hurtlesly necessary, hath been the sport or Recreation of Gods Saints, of most holy Fathers, and of many Worthy and Reverend Divines, both dead, and at this time breathing.

For the use thereof (in its own true and unabused nature) carrieth The use of Angling.

rieth in it neither covetousnes, deceit, nor anger, the three main spirits which ever (in some ill measure) rule in all other pastimes: neither are alone predominant without the attendance of their several hand-maids, as Theft, Blasphemy, or Blood-shed: for in Dice-play, Cards, Bowls, or any other sport where money is the goal to which mens minds are directed, what can mans avarice there be accounted other then a familiar Robbery, each seeking by deceit to couzen and spoyl others of that blisse of meanes which God hath bestowed to support them and their families. And as in every contention there must be a better-hood or super-excelling; so in this, when the weaker deceipt is deprived of his expectation, how doth it then fall into Curses, Oaths, and furies, such as would make Vertue tremble with the imaginations?

But in this Art of Angling there is no such evil, no such sinful violence, for the greatest things it coveteth, is for much labour a little Fish, hardly so much as will suffice Nature in a reasonable stomach: for the Angler must intice, not command his reward; and, that which is worthy millions to his contentment, another may buy for a groat in the Market. His deceipt worketh not upon men, but upon those Creatures whom it is lawful to beguise for our honest Recreations or needful use; and for all rage and fury it must be so great a stranger to this civil pastime, that if it come but within view or speculation thereof, it is no more to be esteemed a pleasure: For every proper good thereof in the very instant faileth, shewing unto all men that will undergo any delight therein, that it was first invented, taught, and shall for ever be maintained by Patience only. And yet I may not say, onely Patience; for her other three Sisters have likewise a commanding in this exercise, for Justice directeth and appointeth out those places where men may with liberty use their sport, and neither do injury to their Neighbours, nor incur the censure of incivility. Temperance layeth down the measure of the action, and moderateth desire in such good proportion, that no Excess is found in the over-flow of their affections. Lastly, Fortitude enableth the Mind to undergo the travail and exchange of Weathers, with a healthful ease, and not to despair with a little expence of time, but to persevere with a constant imagination in the end to obtain both pleasure and satisfaction. Now

Now for the Antiquity thereof (for all pleasures, like Gentry, are held to be most excellent, which is most ancient) it is by some Writers said to be found out by *Deucalion* and *Pyrrha* his Wife, after the general flood. Others write, It was the invention of *Saturn*, after the Peace concluded betwixt him and his brother *Titan*: And others, That it came from *Belus* the Son of *Nimrod*, who first invented all holy and vertuous Recreations. And all these though they savour of fiction, yet they differ not from truth, for it is most certain, that both *Deucalion*, *Saturn*, and *Belus* are taken for figures of *Noah* and his Family, and the invention of the Art of Angling, is truly said to come from the Sons of *Seth*, of which *Noah* was most Principal. Thus you see it is good, as having no coherence with evil: worthy of use, in as much as it is mixt with a delightful profit: And most antient, as being the Recreation of the first Patriarchs; Wherefore now I will proceed to the Art it self, and the means to attain it. The Antiquity of Angling.

CHAP. X.

Of the Angle-Rod, Lines, Corks, and other tools for Angling.

IN as much as the first Ground-Work or Substance of this Art of Angling consisteth in the implements belonging and appertaining thereunto, and that except a man be possest of them which are most exact, nimble or necessary for the same, his labour is vain, and to little or no purpose imployed, and for as much as the Angle Rod is the greatest, principallest, and sole Director of all other Tools belonging thereunto, I think it not amiss to begin with the choyce and order thereof, according to the opinions of the best noted Anglers, which either have been in times past, or are at this day living.

For the choyce then of your Angle-Rod, you shall understand that some Anglers are of opinion, that the best should be composed of two pieces, a main body, and a small pliant top. The Main body would be of a fine grown ground-Witchin, or a ground Elme, of at least nine or ten foot in length, streight, smooth, without knots, and not much differing at either end in one

one substance or thickness. It would be gathered at the fall of the leaf, near or about *All-hallontide*, and laid up in some dry place, where it may lye straight, and of it self season: For to beak them in the fire (as many do, when they are green, is not so good; but after they be well dryed and seasoned of themselves, then to beak them in the fire, and set them so streight and even that an arrow cannot surpass them, is excellent; then you may take off the upper rind, and what with the smoak, and their own age, their colour will be so dark, that they will give no reflect into the Water, (which is a principal observation). Your Rod being made thus streight and seasoned, you shall at the upper end thereof with an augur or an hot Iron (but a hot Iron is the better) burn a hole about three inches deep, and of a fingers wideness: then on the out-side of the Rod, from the top of the hole unto the bottome, you shall wrap it about either with strong double twisted thred well waxed or pitcht, or with Shoemakers thred many times doubled and well waxed with Shoemakers Wax, and the last end fastned under the last folds, so close and so sure, that it may by no means loose; for this will keep the Rod from cleaving or breaking in that same place where the hollowness was made.

Of the top of the Angle-Rod.

The stock being thus made, you shall into the hole fixe the Top, which would be a very small ground Hazel, growing from the Earth upward, very smooth and streight, which would be cut at the later end of the year, and lye in season all the Winter, the upper Rinde being by no means taken off, neither the Rod put into the fire at all, but only seasoned in a good dry place, where it may lye streight, and have both the Wind and some Ayr of the Fire to come unto it. This Top must be pliant and bending, yet of such a sufficient strength, that it will not break with any reasonable jerk, but as it is any way bowed, so to return again to the former straightnesse. This top wand would be of a yard and a half, or an Ell at least in length, and at the smallest end thereof would be fastned with a warp of hair, or a strong loop of hair, about an inch long, to which you may at pleasure fasten your fishing line; and the bigger end of the top must be thrust into the socket of the stock, and made so fast, that it may

may not looſen nor ſhake out with any ſhaking or other reaſonable violence. And albeit the Witchin or Ground Elme are accounted the beſt to frame theſe main ſtocks of, yet I have ſeen very good ſtocks made both of Sallow, Beech or Poplar; for the lighter your Rod is, (ſo it be ſtrong) it is ſo much the better, and more for the eaſe of him that uſeth it.

The Angle-Rod of one piece.

There be other approved good Anglers which allow onely the Rod which is compoſed all of one entire piece, and think them ſtronger, nimbler, and leſſe caſual: and theſe Rods they would have choſen of an excellent ſtreight and well-grown Ground Hazel, being from the bottome to the top finely Ruſh-grown, the upper end thereof being ſmall, plyant and bending. This Rod ſhould be gathered at the fall of the leaf, when the leaves are ſome fallen and ſome ſticking: as ſoon as you have cut them up, you ſhall cut away the leaves and ſmall ſprigs, yet not ſo near that you hurt the bark (for that by no means muſt be ſtir'd, as well for the ſtrength of the Rod, as for the colour, which being dark will not ſo ſoon catch the eye of the Fiſh and offend them.) Then bringing your Rods home, you ſhall lay them upon a level floor, and preſſing them down with good weights, to keep them from warping, let them lye and ſeaſon all the Winter: Then in the Spring-time take them up for your purpoſe, which is only to make the knots ſmooth, and to fix your loop of hair unto the upper end. Now of theſe Rods, the longeſt is the beſt, ſo it be ſtreight and well grown; for moſt commonly they are ſo ſhort, that they will ſerve to fiſh with but in little narrow Brooks, or elſe in a Boat, in great waters.

The Anglers Rod of many pieces.

There be other Anglers, and many of the beſt and approvedſt judgment, which allow the Angle-Rod of many pieces: as thoſe which are made of Cane: each piece exceeding another one degree, in ſuch even proportion that being fixed and thruſt one within another, they will ſhew as one even and moſt ſtreight Ruſh-grown body, without any crookedneſs or other outward evil favouredneſs. Theſe pieces would not be above

above four foot in length apiece, and three such pieces, which make twelve foot, are sufficient for the stock of the Rod, besides the top. Now for those ends which are the sockets, into which you fix the other Canes, you shall hoop them about with fine plates of Brass, an inch and an half broad, well sodered, and smoothly filed, which will keep the Cane from cleaving: and for the top of this Rod, the round Whale-bone is thought the best; and surely in my conceit so it is both for this or any other Rod whatsoever; for it is tough, strong, and most plyant. These Rods most commonly are made to have the small Canes thrust down into the wide Canes, so that a man may walk with them as with a staff, as when he pleaseth to draw them forth, and use them as occasion shall be offered. The onely Exception which is taken at these kind of Rods, is the bright colour of the Cane, which reflecting into the water, oft-times scareth the Fish, and maketh them afraid to bite: But if you fish in deep and thick Waters, there is no such matter, for the shadow of the Rodde is not discerned through the Sun, onely in shallow and clear Brooks it is a little hindrance; and therefore he which is a Master in this Art, will Umber and darken the Rod, by rubbing it over a gentle fire with a little Capons grease, and brown of Spain, mixt together.

Of the Lines. Now for your Lines, you shall understand that they are to be made of the strongest, longest, and best grown Horse-haire that can be got, not that which groweth on his Main, nor upon the upper part or setting on of his tayl, but that which groweth from the middle and inmost part of his dock, and so extendeth it self down to the ground, being the biggest and strongest hairs about the Horse: neither are these hairs to be gathered from poor, lean and diseased Jades of little price or value, but from the fattest, soundest, and proudest Horse you can find, for the best Horse hath ever the best hair; neither would your hairs be gathered from Nags, Mares, or Geldings, but from ston'd Horses only, of which the black hair is the worst, the white or gray best, and other colours indifferent. Those Lines which you make for small fish, as Gudgeon, Whiting or Menew, would be composed of three hairs: those which you make for Pearch or Trout, would be

be of five hairs, and those for the Chub or Barbel, would be of seven: To those of three hairs, you shall add one thread of silk; to those of five, two threads of silk; and to those of seven, three threads of silk. You shall twist your hairs neither too hard nor too slack, but even so as they may twind and couch close one within another, and no more, without either snarling or gaping one from another; the end you shall fasten together with a Fishers knot, which is your ordinary fast knots, foulded four times about, both under and above, for this will not loose in the water, but being drawn close together, will continue, when all other knots will fail; for a hair being smooth and stiff, will yield and go back, if it be not artificially drawn together. Your ordinary line would be between three and four fadom in length, yet for as much as there are diverfities in the length of rods, in the depth of waters, and in the places of standing to Angle in, it shall be good to have lines of divers lengths, and to take those which shall be fittest for your purpose.

The colouring of Lines.

These lines, though the natural hairs being white or grey, be not much offensive, yet it shall not be amiss to colour them according to the seasons of the year, for so they will least scare the Fish, and soonest intice them to bite with most greediness, and of colours, the best is the water-green, which you shall make after this manner: Take a pottle of Allom-water, and put thereunto a great handful of Marigolds, and let them boil well, till a yellow scum rise upon the water, then take half a pound of green Copperas, and as much Verdigrease, beaten to fine powder, and put it with the hair into the water, and so let it boyl again a pretty space, and then set it by to cool for half a day, then take out your hair, and lay it where it may dry, and you shall see it of a delicate green colour, which indeed is the best water-green that may be. This colour is excellent to angle with in all clear waters where the line lies plain, and most discovered, and will continue from the beginning of the Spring, to the beginning of Winter. Now if you will have your lines of a yellow colour, you shall boyl your hair in Allom-water, mixt only with Marigolds, and a handful of Turmerick; but if you cannot get Turmerick, then you shall stamp so much of green Walnut-tree leaves, and mixe

it with the water, and ſteep your hair therein twenty and four hours at leaſt.

Lines of this colour are good to Angle with, in waters that are clear, yet full of weeds, ſedge, and ſuch like; for it is not unlike to the ſtalks of theſe weeds, and it will well continue to Angle withall, the firſt part of the Winter, as from before *Michaelmas*, till after *Chriſtmas*.

If you will have your Lines of a ruſſet colour, you ſhall take a part of Allom-water, and as much ſtrong Lye, then put thereto a handful of ſoot, and as much brown of Spain, and after it hath boyled an hour or two, ſet it by to cool, and when it is cold, ſteep your hair therein a day and a night, and then hang it up to dry: theſe coloured lines are good to angle with in all deep waters, whether they be Rivers or ſtanding Pools, as Ponds, and ſuch like, and are moſt in uſe from *Chriſtmas* till after *Eaſter*.

Now if you will have your lines of a brown or duskiſh colour, you ſhall take a pound of *Umber*, and half ſo much ſoot, and ſeethe it in a pottle of Ale a good ſpace; then when it is cold, ſteep your hairs therein a day and a night, and then hang them up to dry, and the colour will be perfect; yet ever the darker you would have it, the more Umber put unto it: Theſe Lines are excellent to angle with in Waters that are black, deep and muddy, be they either running or ſtanding Waters, and will continue all ſeaſons of the year whatſoever, only in bright Waters they are too black, and caſt too large a ſhadow. Laſtly, if you would have your Lines of a tawny colour, (although in the Water it ſheweth almoſt all one with the other darker colours) you ſhall take Lime and Water, mix it together, and ſteep your hair therein half a day, &, then take it forth and ſteep it double ſo long time in Tanners ouze, and then hang it up to dry, and the colour will be perfect: theſe lines are beſt to angle with in Mooriſh and Heathy Waters, which are of a reddiſh colour, and will ſerve for that purpoſe all ſeaſons of the year: if with this colour or the green, you mix a ſilver thread, it will not be amiſs: and with the other colours, a gold thread is good alſo. And note, That at each end of your line, you make a loop, the one to faſten to the

top

top of your Rod, being the larger; and the other to fasten your hook-line unto, which would be somewhat lesser.

Of the Cork.

After your Lines be made, you shall make your Corks in this manner; Take of the best and thickest Cork you can get, and with a fine Razor having pared it smooth on the outside, cut it into the fashion of a long Katherine Pear, big and round at the one end, and long and slender at the other, and according to the strength of your Line, so make your work bigger or lesser; as for a Line of three hairs, a Cork of an inch and half in length, and as much in compass in the thickest part, is big enough: and for a Line of more hairs, a Cork of more length and compass will become it. And indeed to speak truly, forasmuch as it serveth but only for a direction to your eye, to know when the fish biteth, and when you shall strike; the lesser your Cork is, the better it is, and breedeth less affright in the water, insomuch, that many Anglers will fish without any Cork, with a bare quill only, but that it is not so certain, nor giveth so sure direction as the Cork doth. After you have shaped your Cork, you shall with a hot Iron bore a hole long-wise, through the midst thereof, and into that hole thrust a quill, and through the quill draw your Line, and fasten them both together with a wedge of the hard end of the Goose feather. And note, That both your quill and your wedge be white, for that breedeth least offence on the water; then place the smaller end of your Cork down toward your hook, and the bigger end toward your rod, that the smaller end sinking down with the hook, the bigger may float aloft and bear the quill upward, which when at any time you see or perceive pull'd down into the water, then you may safely strike; for without doubt it is an assured sign that the Fish hath bitten at the bait.

There be other Anglers which make their Corks in the fashion of a Nunne gig, small at both ends, and big in the midst, and it is not much to be disliked, onely it is a little sooner apt to sink, and you may thereby strike before the fish have full bitten. Others shape their Corks in the fashion of a whirle, or of a little apple, round, flattish of both sides, and this Cork is best to Angle for the greatest Fishes, because it being not so apt to

sink, will float till the hook be fastned, and that the Fish beginneth to shoot away with the baite, so that a man then striking can seldome or never lose his labour.

Of Angling hooks.

Next to your Corks, is your hooks, and they be of divers shapes and fashions, some big, some little, some between both, according to the Fish at which you angle: the best substance whereof to make them, is either old Spanish needles, or else strong wier drawn as near as may be to that height of temper, which being nealed and allaid in the fire, you may bend and bow at your pleasure. Now for the best softning of your wier, if you make your hooks of old needles, you shall need but to hold them in the blaze of a candle till they be red hot, and then let them cool of themselves, and they will be soft and pliand enough; but if you make your hooks of strong Spanish Wier, you shall roul it round, and lay it upon burning Charcoals, turning it up and down till it be all red hot in every place, then let it gently cool of it self, and it will be soft enough.

Now for the making of your hooks, I advise you to go to such as are best reputed for making of them, and buy of all sorts from the biggest to the least; that is to say, from that which taketh the Loach, to that which taketh the Salmon; and let them lie before you for examples: then look of what sorts of hooks you intend to make, and with a fine File first make the point of your hook, which would neither be too sharp, for then it will catch hold of every thing, when it should not; nor too blunt, lest it fail to take hold when there is occasion: therefore in that observe a mean, making it lesse then a fine needle, and more sharp then a small Pin. When you have made the point, then with a thin knife of a very good edge, you shall cut out and raise up the beard, which you shall make greater or less, according to the bigness of the hook, and the strength of the wier: for you must by no means cut the beard so deep, that thereby you weaken the hook, but must be as strong in that place as any other. When the point and beard is made, you shall with a fine pair of round plyers, turn and compasse the hook about, making it round, circular-wise, being somewhat more then a semi-circle; and ever observe

observe, that the rounder the compasse or bout cometh in, that so much the better proportioned the hook is. This done, you shall leave as much as you think convenient for the shank, and then cut it off from the rest of the wier; which done, you shall beat the end down flat, and somewhat broader then the rest, and so pollish and smooth it all over, then heating it red hot in a little pan of Charcoals, put it suddainly into the water, and quench it, which will bring your hook to a full strength and hardnes.

Thus you see how to make hooks of all sizes and shapes, whether they be single or double hooks, for although the quantities alter, yet the shapes do not; and the double hook, which is the Pike-hook, is no other but two single hooks all of one wier turned contrary-wayes, and this double hook must not have the line fix'd unto it, but a strong wier joyned unto it, of three inches long, well wound, and wrapped with a smaller wier: then add to it another wier of the same length, as if they were two several links joyned together, and then the line fixed to the last link; and therefore are called armed hooks, for they defend the line from shearing or cutting in pieces with the teeth of the Pike.

Now for your single hooks, you shall thus fix them unto your lines, take a length of your twisted hairs, containing that number which is fit for the hook, and having made a strong loop at the one end, lay the other end where there is no bout, upon the inside of your hook; then with a strong red silk either single or double, according to the bigness of the hook, being well waxed, whip and wrap the hook round about, as thick, close, and strait as may be, in such sort as you see men whip their Bow-strings, and in the same manner make the ends of your silk fast; then with a sciffers cut the silk and hairs off close by the hook, and you may be sure that they will not loose one from another, with reasonable violence.

After your hook is thus fastned to your line, you shall then plumb your line, which is to fix certain pieces of lead, according to the bigness of your line about it, some being in length a quarter of an inch, some bigger, and some less, according unto the weight

weight of your hook, and bigneſs of your Cork, for theſe plummets are but only to carry down your hook, and lay it in the bottom, neither being ſo heavy to make the Cork ſink; nor ſo light, as not with the ſmalleſt touch to make the Cork to dip into the water; you ſhall then underſtand, that your firſt plummet would be twelve or fourteen inches from the hook, the reſt not above one inch diſtance one from another, not being above five or ſeven at moſt, albeit ſome Anglers uſe nine, and ſome more, as their fancies rule them. There is in plumbing of Lines, three ſeveral faſhions of Plummets uſed, as one long, another ſquare, and the third in a Diamond form, but all tending to one end, have but one uſe, and the long ones are accounted the beſt, ſo that they be neatly ſet to, and the end very ſmooth and cloſe laid down, ſo that they tangle not the Line by catching hold upon weeds, or other traſh in the bottom of the water.

Of other Implements for Angles.

Thus have you ſeen the beſt choice of Rods, Lines, Corks and Hooks, and how to fix and couple them all together to do their ſeveral Offices; It now reſteth that we ſpeak of other neceſſary implements, which ſhould accompany the Painful and Induſtrious Angler, and they be theſe: He ſhall beſides theſe before ſpoken of, have a large musket-bullet, through which having fixed a double twiſted thread, and thereof made a ſtrong loop, he may at his pleaſure hang it upon his hook, and therewith ſound the depth of every water, and ſo know how to plumb his lines, and place his Cork in their due places; then he ſhall have a large ring of Lead ſix inches at leaſt in compaſs, and made faſt to a ſmall long Line, through which thruſting your Angle Rod, and letting it fall into the water by your hair-Line; it will help to unlooſe your hook if it be faſtned either upon weed, or other ſtones in the water.

Then he ſhall have a fine ſmooth Board of ſome curious wood for ſhew ſake, being as big as a Trencher, and cut battlement-wiſe at each end, on which he ſhall fold his ſeveral Lines. His Hooks he ſhall have in a dry cloſe Box, he ſhall have a little bag of red cloth, to carry his Worms in, and mixt with them a little freſh mould and Fennel: then he ſhall either have a cloſe ſtopt

ſtopt horn, in which he ſhall keep Maggots, Bobbes, Palmers, and ſuch like, or a hollow Cane, in which he may put them, and Scarrabs: He ſhall have a cloſe Box for all ſorts of live flies, and another for Needles, Silk, Thread, Wax, and other looſe hairs; then a roul of pitch-thread to mend the Angle-Rod withal, if it chance to break, a file, a knife, a pouch with many purſes, in which you may place all your implements whatſoever ſeverally.

Laſtly, he ſhall have a little fine wanded Peppe to hang by his ſide, in which he ſhall put the fiſh he catcheth; and a ſmall round net faſtened unto a poles end, wherewith he may land a Pike, or any other great Fiſh of that kind whatſoever. To have alſo a little Boat or Cot, if you Angle in great Waters, to carry you up and down, to the moſt convenienteſt places for your paſtime, is alſo right neceſſary, and fit for an Angler; And thus I have ſhewed you the ſubſtance of the Anglers inſtrument.

CHAP. II.

Of the Anglers Apparell, and inward Qualities.

TOuching the Anglers Apparel (for it is a reſpect as neceſſary as any other whatſoever) it would by no means be gariſh, light-coloured, or ſhining, for whatſoever with a glittering hew reflecteth upon the water, immediately it frighteth the Fiſh, and maketh them flie from his preſence; no hunger being able to tempt them to bite, when their eye is offended; and of all creatures there is none more ſharp-ſighted then Fiſhes are.

Anglers apparel.

Let then your apparel be plain and comely; of a dark colour, as Ruſſet, Tawny, or ſuch like, cloſe to your body, without any new faſhioned flaſhes, or hanging ſleeves, waving looſe, like ſails about you, for they are like blinks, which will ever chaſe your game from you: let it for your own health and eaſe ſake, be warm and well lined, that neither the coldneſs of the Ayr, nor the moiſtneſs of the Water may offend you: keep your head and feet dry, for from the offence of them ſpringeth Agues, and worſe infirmities.

Anglers vertues.

Now for the inward qualities of the minde, albeit ſome Writers

Writers reduce them to twelve heads, which indeed whosoever enjoyeth, cannot chuse but be very compleat in much perfection, yet I must draw them into many more branches. The first, and most especial whereof is, that a skilful angler ought to be a general Scholler, and seen in all the Liberal Sciences, as a Grammarian, to know how either to Write or Discourse of his art in true and fitting terms, either without affectation or rudeness. He should have sweetness of speech, to perswade & intice others to delight in an Exercise so much laudable. He should have strength of Arguments to defend and maintain his profession, against envy or slander. He should have knowledg in the Sun, Moon, and Stars, that by their aspects he may guesse the seasonableness or unseasonableness of the weather, the breeding of storms, and from what Coasts the winds are ever delivered. He should be a good knower of Countries, and well used to High-wayes, that by taking the readiest paths to every Lake, Brook, or River, his Journies may be more certain, and less wearisome. He should have knowledge in proportions of all sorts, whether Circular, Square, or Diametrical, that when he shall be questioned of his diurnal progresses, he may give a Geographical description of the angles and channels of Rivers, how they fall from their heads, and what compasses they fetch in their several windings. He must also have the perfect art of numbring, that in the founding of Lakes or Rivers, he may know how many foot or inches each severally containeth; and by adding, substracting, or multiplying the same, he may yield the reason of every Rivers swift or slow current. He should not be unskilful in Musick, that whensoever either melancholy, heavines of his thoughts, or the perturbations of his own fancies, stirreth up sadnes in him, he may remove the same with some godly Hymn or Anthem, of which *David* gives him ample examples.

He must be of a well setled & constant belief, to enjoy the benefit of his Expectation; for then to despair, it were better never to be put in practice: And he must ever think where the waters are pleasant, and any thing likely, that there the Creator of all good things hath stored up much of his plenty, and though your satisfaction

satisfaction be not as ready as your wishes, yet you must hope still, that with perseverance you shall reap the fulness of your harvest with contentment: Then he must be full of love both to his Pleasure and to his Neighbour: To his pleasure, which otherwise will be irksome and tedious; and to his Neighbour, that he neither give offence in any particular, nor be guilty of any general destruction: then he must be exceeding patient, and neither vex nor excruciate himself with losses or mischances, as in losing the prey when it is almost in the hand, or by breaking his Tools by ignorance or negligence, but with a pleased sufferance amend errors, and think mischances instructions to better carefulness.

He must then be full of humble thoughts, not disdaining when occasion commands to kneel, lye down, or wet his feet or fingers, as oft as there is any advantage given thereby, unto the gaining the end of his labour. Then must he be strong and valiant, neither to be amazed with Storms, nor affrighted with Thunder, but to hold them according to their natural causes, and the pleasure of the highest: neither must he, like the Fox which preyeth upon Lambs, employ all his Labour against the smaller Frey: But like the Lyon that seizeth Elephants, think the greatest Fish which swimmeth, a reward little enough for the pains which he endureth. Then must he be liberal, and not working onely for his own belly, as if it could never be satisfied; but he must with much cheerfulnesse bestow the fruits of his Skill amongst his honest Neighbours, who being partners of his gain, will doubly renown his triumph, and that is ever a pleasing reward to Vertue.

Then must he be prudent, that apprehending the Reasons why the Fish will not bite, and all other casual impediments which hinder his sport, and knowing the Remedies for the same, he may direct his Labours to be without troublesomeness.

Then he must have a moderate contentation of the Mind to be satisfied with indifferent things, and not out of any avaritious greedinesse think every thing too little, be it never so abundant.

Then must he be of a thankful nature, praising the Author of all goodness, and shewing a large gratefulness for the least satisfaction.

Then must he be of a perfect memory, quick and prompt to call into his mind all the needful things which are any way in this exercise to be imployed, lest by omission or by forgetfulness of any, he frustrate his hopes, and make his labour effectlesse, Lastly, he must be of a strong constitution of body, able to endure much fasting, and not of a gnawing stomach, observing hours, in which if it be unsatisfied, it troubleth both the Mind and Body, and loseth that delight which maketh the pastime only pleasing.

Cautions. Thus having shewed the inward Vertues and Qualities which should alwayes accompany a perfect Angler, it is very meet now to give unto you certain Cautions, which being carefully observed, you shall with more ease obtain the fulness of your desires. First therefore, when you go to Angle, you shall observe, That all your Tools, Lines, or Implements be (as the Sea-man saith) yare, fit, and ready; for to have them ravell'd, ill made or in unreadiness, they are great hindrances unto your pleasure. Then look that your baits be good, sweet, fine and agreeing with the season: for if they be otherwise unproper in any of their natures, they are useless, & you had better have been at home then by the River. Then you must not Angle in unseasonable times, for the Fish being not inclined to bite, it is a strange inticement that can compel them. Then you must be careful neither by your apparel, motions, or too open standing, to give affright to the Fish; for when they are scared they flye from you, and you seek society in an empty house. Then must you labour in clear and untroubled waters, for when the Brooks are any thing white, muddy and thick either through inundations or other trouble, it is impossible to get any thing with the Angle: Then, to respect the temper of the weather, for extream wind or extream cold taketh away all manner of appetite from Fish: So doth likewise too violent heat, or rain that is great, heavy, and beating, or any Storms, Snows, Hail or Blustrings, especially that which cometh from the East, which of all is the worst. Those which blow from the South are best; and those which come from the North or West are indifferent. Many other Observations there are, but they shall follow in their due places.

CHAP.

CHAP. XII.

Of the best and worst Seasons to Angle in, and their Uses.

BEfore I direct you in the best Seasons, and their contrary, for the general Art of Angling, I think it not amiss, a little by the way, to give you a glance or speculation how to order your Body and Art of each several water: for the manner of your standing and concealing of your self is a material and chief point in this Art.

Know then, That if you Angle in any Pond or standing Water, you shall before you fall to your business, with your Plumbe, sound the Water in divers places, and where you find it deepest, blackest, and least transparent, there you shall stand to Angle, placing your self under the bank, and if it be possible, so as your shadow may be carried from the Water: For you must at no time, if you can chuse, let your shadow lye upon the water: and although in these deep places your standing open or close, are either of them reckoned indifferent, because the waters depth is a sufficient concealment, yet the closer you stand, is accounted amongst Anglers most handsome and artificial. The Anglers manner of standing.

But if you go to Angle at the River, then the best place to cast in your Line, is, where it is deepest and cleerest, so as you may behold the Sand or Gravel at the bottome: and in these places you shall strive to conceal your self as much as possible, as standing behind Poplars, Oziers, or other Trees, or under the covert of some Bank, Rock, or other ruines at the side of the River: also in covert places, where are many Weeds, Roots of Trees, and other rubbish, is good Angling, but very troublesome: for Fish lying there warm and in safety, will have a great resort thereunto, and bite freely, so that the Angler must be careful in the putting in of his hook, and very deliberate in striking, lest doing any thing rashly, he break his Line and hook, being never so little intangled.

It is good also to Angle in Whirle-pools, for they being like pits within the Rivers, are seldome unfurnished of the greatest Fishes; also, it is good to Angle at the falls of water, as

under Bridges, ſtanding behind the Jawmes and Arches, or at the flood-gates of Mills, being hid with the higher Timbers. And generally where you ſee the water is deepeſt, cleareſt and calmeſt, being leaſt troubled with wind or weather, is the fitteſt place to angle in. Other obſervations there are, but they will follow in more neceſſary places.

The beſt ſeaſon to Angle in.

To return then to our firſt purpoſe. You ſhall know the beſt ſeaſon to Angle in, is from *April* to the end of *October*, ſpeaking of the general uſe of the pleaſure; and the beſt hours alſo in general account, are from four in the morning till nine, and from three in the Afternoon till after five in the Evening, the wind blowing from South, Weſt, or North, and the ayr temperate, inclined to warmneſs; but to ſpeak of particular obſervations of ſeaſons, know, that if the day be dark, cloſe and lowring, or have a gentle whiſtling and playing upon the water, it is good to Angle in, and the Fiſh will bite with pleaſure: Nay, if a fine mizling dew of Rain fall gently, without violence, they will then bite the faſter: Alſo after Floods are gone away, and the Rivers are come within their own Banks, the firſt cleerneſs recovered, and the water pure, then it is good to Angle. And generally for your Summer Angling, chooſe the cooleſt time of the day, for in the heat of the day Fiſh betake themſelves to their reſt, and will neither bite nor play.

But for your Winter Angling, which is from *October* to *April*, you ſhall not make any difference of time, if the weather be calm, for all hours of the Sun are alike, only the noon-tide or mid-day is moſt preferred, eſpecially in Ponds and ſtanding water. If the water where you Angle, ebbe or flow, the beſt time of Angling, is held to be in the ebbe: yet in ſome places where the Tide is not great, there the flood is preferred. Laſtly, whenſoever you ſee the Trout play or leap above the water, and the Pike ſhut in purſuit of other fiſhes, it is then a very good time to Angle in, uſing ſuch baits as are then meet for the moneth and ſeaſon, as ſhall be ſhewed hereafter.

Seaſons ill to Angle in.

Now for thoſe ſeaſons which are naught to Angle in, there is none worſe than in the violent heat of the day, or when the Winds are loudeſt, Rain heavieſt, Snow and Hail extreameſt: Thunder and Lightning are offenſive, or any ſharp ayr which flyeth from the

the East: The places where men use to wash Sheep you shall forbear, for the very smell of the Wooll will chase fish from their haunts, Land-floods are enemies to Anglers; so also at the fall of the Leaf is the shedding of leaves into the water, and many other such like pollutions, of which we will speak something more hereafter.

Therefore, to conclude this Chapter, and to shew you as well how to find your fish, as the Art to take it being found; you shall know, that the Carp, Eele, and Tench, do ever haunt muddy places: the first, which is the Carp, lyeth ever in the depth and bottom thereof; the Tench, among the weeds and roots of Sedges; and the Eele under stones, blocks, or the roots of Trees. Of Fishes Haunts.

The Bream, the Chevin and the Pike, haunt ever in the cleer and sandy bottom; the Pike where you see great store of small fry; the Chevin where the stream runneth swiftest, and the shade is greatest; and the Bream where the water is broadest, and the depth giveth greatest liberty; and generally these three sorts of Fish delight more in standing Waters then in running Rivers, although the ancient Proverb is,

Ancome Eele, and Witham Pike,
In all England is none like.

which are Rivers in *Lincolnshire*. Now the Salmon hath his haunt in the swiftest and broadest Rivers, whose Channels fall down into the Sea. The Trout loveth smaller Brooks, whose current is swift, clear, gravelly, and ever hath his lodging in the deepest holes that are therein; and the Perch haunteth Rivers of the same nature, only he abideth most in Creeks and hollownesses, which are about the bank; and indeed these three Fishes generally, Salmon, Trout and Perch love clear streams, being green with weeds, and the bottoms hard with gravel and pibble.

The Gudgeon, the Loach and the Bulhead haunt ever shalloweſt places, and where streams are slow yet transparent; The Barbel, Roch, Dace and Ruff, haunt the deep shady places of those Brooks which are mixt with more sand than gravel, or where the clay is firm and not slimy, and delight ever to lye under the shadows

dows of Trees, brambles or other things growing from the bank.

The Luce or Lucern, which indeed is but the over-grown Pike haunteth the broad and large Meares, which are miles in compasse, being deep and still, and ever lodgeth in the bottome thereof amongst the Roots and Tufts of Sedge, and Bulrushes, being quiet and least troubled. The Humber haunts the clayie Rivers of High Countries; where the soyl is rich and full of Marle, or in Lakes or Ponds of the same nature. The Shad and Tweat haunt those Waters which are brackish, deep, and accustomed to ebb and flow: and where they haunt, there commonly also is found both the Mullet and Suant: all which love to lodge close and flat at the bottome of the Water, so it be more Ooze than gravel.

Objection. But here now methinks I hear the Curious reprehend me, saying, That if these Rules should be infallible, that then no River or Pond could contain above three sorts of Fish only, when daily Experience sheweth us, that some Rivers have ten, some twenty, and some thirty; As the *Trent* for example, whose ancient name in *French* is *Trianta*, in Latine *Triginta*, and in English *Thirty*, derived from this ground, because there standeth upon her, Thirty Castles, Thirty Market Towns, and are in her Thirty several sorts of Fishes.

Answer. To which I thus answer, that forasmuch as into most Rivers falleth many several waters and many soyls, according unto the nature of those Countreys through which the Channels run, that therefore every alteration of soyl may alter the breed of Fry, and many several kinds may be in one Stream, for that the Angler in the choice of his pastime in such places, must either have a perfect knowledge how the soyls do alter (which he may commonly know by the bank,) or else rely upon his experience, which will be the best Tutor to direct him unto the haunts of several fishes; but for Ponds or standing Waters which are of one earth, there you shall surely find them best prosper, which are before rehersed.

CHAP.

CHAP. XIII.

Of Baits in general, and of every particular kind; their Seasons, Use, and Preservations.

SInce I have thus far orderly passed over the outward and instrumental necessaries appertaining to this modest Recreation, shewing the several tools and implements which are to be imployed therein, and have also shewed the inward and mental knowledg which should be harboured in his breast that will be an Angler; I will now proceed to speak of the Baits and intisements, which are the Agents and effecters of our desires in this pastime, without which all other implements are vain and useless: for what doth it avail to have all other things in perfection, when this, which is the strength and life of the rest, is either imperfect or defective?

To speak then generally of Baits, they are divided into three kinds, which are Life-baits, Dead-baits, and Baits living but in appearance only. Your Life-baits are Worms of all kinds, especially the Red-worm, the Maggot, the Bobb, the Dor, Brown-flyes, Frogs, Grashoppers, Hornets, Wasps, Bees, Snails, small Roches, Bleaks, Gudgeons or Loches. Your dead baits are pastes of all makings, your brood of Wasps dryed or undryed, the clotted bloud of Sheep, Cheese, Bramble-berries, Corn, Seeds, Cherries, and such like. And your Baits which seem to live, yet are dead, are Flyes artificially made of all sorts and shapes, made of silk and feathers about your hooks, which will serve for every several season through the year, and being by your Line moved upon the water, seem to be live Flyes, which the Fish with great greedinesse will catch up and devour.

Now for the season in which these baits are most profitable; you shall understand that the Red worm will serve for small Fish all the year long; the Maggot is good in *July*, the Bobb and Dor in *May*, the brown flyes in *June*, Frogs in *March*, Grashoppers in *September*, Hornets in *July*, Wasps and Bees in *July*, Snails in *August*; for the Roch, Bleak or Gudgeon, they serve the Pikes at any season: all Pastes are good in *May*, *June*, and *July*; dryed Wasps in *May*; Sheeps Blood and Cheese in *April*: for Bramble-berries, Seasons.

berries, Corn and ſeeds, they are good at the fall of the Leaf.

Of Flyes. Laſtly, for your dead flyes, which are moſt proper for the Trout or Graveling, you ſhall know that the Dun Fly is good in *March*, being the leſſer; but the greater Dun Fly will ſerve the later end of *February*: the Stone Fly is good in *April*, the Red Fly and Yellow Fly in *May*; the Black Fly, the dark Yellow Flye, and the Mooriſh Fly in *June*; the Tawny Fly part in *May*, and part of *June*; the Waſp Fly, and the Shell Fly in *July*; and the Clowdy dark Fly in *Auguſt*.

The making of Flyes. Now for the making of theſe Flyes, the Cloudy dark Flye is made of black Wooll clipt from between a Sheeps Ears, and whipt about with a black ſilk, his wings of the under Mail of the Mallard, and his head made black and ſuitable, fixed upon a fine piece of Cork, and folded ſo cunningly about the hook, that nothing may be perceived but the point and beard only. The Shell flye is made of fine green Flocks, and the wings of a Pew-glead. The Waſp Fly is made of Black Wooll, lapt about with yellow ſilk, and the wings of the down of a Buzzard. The Tawny Fly is made of tawny wooll, and the wings ſet on contrary to another, and made of the white down of a Widgeon. The Mooriſh Fly is made of fine Flocks ſhorn from a Freeze-gray Ruſſet, and the wings of a Drake. The bright Yellow Fly is made of yellow Wooll, and his wings of a Red Cocks yellow main. The ſad Yellow Fly is made of black Wool, with a twiſted yellow ſilk, like a liſt, whipt down on either ſide, and the wings of the wings of a Buzzard ſet on with black thread. The Black Flye is made of black Wooll, and lapt about with the herle of a Peacocks tayl, his wings with the brown feathers of the Mallard, and ſome of his blew feathers on his head. The Red Fly is made of Red wooll, lapt about with black ſilk, and the wings of the Mail of a Mallard, with ſome of the feathers of a Capon. The Stone Fly is made of black wooll made yellow under the wings, and under the tayl with ſilk, and the wings of Drakes down. The greateſt Dun Fly is made of black wooll, and his wings of the Dun feathers of a Drakes tayl. The leſſer Dun Fly is made of dun wooll, and his wings of the Mail of a Partridge.

Now for the ſhapes and proportions of theſe Flyes, it is impoſſible to deſcribe them without Painting, therefore you ſhall take

of these several Flies alive, and laying them before you, try how near your art can come unto nature, by an equal shape and mixture of colours; and when you have made them, you may keep them in close boxes uncrushed, and they will serve you many years.

Now for the preservation and keeping of your quick baits (for longer then they are neat and sweet they are not good) you shall understand, that they must not be kept altogether, but every kind several by it self, and nourished with such comforts, as it delighteth in, when it is at liberty, or with such things as they breed in or upon when they are first taken. And first for the Red Worm, when you take them, you shall put them in a bag of red cloth, and chopping a handful of Fennel, mixe it with half so much fresh mould being black and fertile, and they will both live and scour therein. There be some Anglers which put wet mosse both under and above them: Others there be, which put Parsly or sweet Marjerom unto them, but the former way is the best, so you observe every night to renew their earth, or once in two dayes to refresh them with a little new Oxe-dung; and thus you may keep them two moneths without imperfection. For the great White Maggots, you shall mix with them sheeps tallow, or little bits of a Beasts Liver; the best way to scour them, is to put them into a bag of blanketing with sand, and hang them where they may have the air of the fire, or other warmth, for the space of an hour or two. For Frogs and Grashoppers, you shall keep them in wet moss, and long grass, moistned every night in water; and when you angle with them, you shall cut off their legs by the knees, and the Grashoppers wings near unto the body. For other Worms, as the Bob, Cadis-worm, Canker, and such like, you shall keep them with the same things you find upon them; and for all live Flyes, you shall use them as you take them, only the Wasp, the Hornet, and Humble-Bee, which is without sting, you shall first dry them a little in a warm oven after the bread is drawn, and then dip all their head into sheeps blood, and then dry them again, and so keep them in a close box, and they will continue two or three moneths in all good perfection.

Preservation of Baits.

Now lastly, to speak of your made baits, which are pastes, the most of them will last the whole year, and as they be divers, so I

Of making pastes.

will shew you how to compound every one of them in his true and perfect nature.

First, to make Pastes that shall last longest; you shall take Bean-flower, and those parts of the Conies leg which is called the Almond of the Coney; or if it be of a fat young Whelp, or a Cat, it is as good: and to these put a like quantity of Virgin Wax, and Sheeps Suet, and then beat them together in a Mortar, untill they be made one body; then with a little clarified Honey temper it before the fire, and so make it up in round balls, and it will last all the year: And the use thereof is, when you angle, to bait your hook therewith, and not any Fish which swimmeth in fresh waters, but will greedily bite thereat.

There is also another paste which is of equal quality and use with this, and will last as long, and that is, to take the Kidney-tallow of a sheep, and as much young Cheese, and beat them in a Mortar till they be one body, then add to them as much Wheat-flower as will bring it to an exceeding stiffe paste, then knead it before the fire, and allay the stiffness with life-honey, and so make it up into balls.

The use of this paste is like the former. Take the blood of a Sheep, and of honey a like quantity, and beat them together with a lump of fresh Cheese, then with the fine grated crums of white bread, work them into a stiff paste, and so roul it up in balls; and when you angle, do not bait your hook therewith, but now and then cast little pellets thereof into the water, and it will intice the fish to resort unto you, and to bite with great greedinesse.

There be others which take bread crums, and beat them in a Mortar with ripe Cherries (the stones being taken out) untill it come to a stiff paste, and then knead it up into balls, and use it as you do that which was last recited. It is most approved, and very excellent for all sorts of fish in fresh waters.

Lastly, If you take the oyl of the Aspray, and Coculus Indiæ, and Assafœtida beaten, and mixe with it as much life-Honey, and then dissolve them in the oyl of Polypody, and so keep it in a close glass, then when you angle anoint your bait with this confection, and though the weather be never so unseasonable, or the fish never so ill disposed to bite, yet be sure you shall not lose

your labour, but take them when all men else fail of their purpose: for the secret hath been rarely approved, and hitherto hath been concealed with great secresie. And thus much for baits, and their uses.

CHAP. XIV.

Of Angling for every several kind of Fish, according to their natures.

Now to shew you how you shall angle most properly for every several Fish, with true art, according to the nature of the fish, I think it not amiss, first to begin with the Gudgeon, Roch, and Dace, which being Fishes of eager bite, most foolish, least affrightful, and soonest deceived, are the first fittest preys for young Schollers, and such as are but Learners in the Art of Angling; for the easinesse of their gaining, will not only settle an unresolved mind, but give unto ignorance both comfort and encouragement. Of the Gudgeon, Roch, and Dace,

If then you will angle for any of these small Fishes in great streams, it shall be meet to take a Boat, and finding the places of their haunt, which is commonly in sandy clear waters, and where they run swiftest, there angle for them with your smallest hooks, well headed, and smallest Lines, well corkt. Your hook would rather drag than be an inch from the bottome, and your best bait is the Red-worm, Cod-worm, Maggot, clotted blood of Sheep cut in little bits, or else the white spawn or brood of Wasps: and ever as soon as you see the cork stir, suddenly strike, for they will lie nibling at the bait, and finding the hook, forsake it. If you angle for them in small Brooks, you shall stand under Bridges, at the falls of Mills, behind Poplars, or Oziers, or any where, where the stream runneth deep and swift. And ever note, That when your bite fails, you remove your place, and seek out a new standing. And withall forget not ever when you angle for any of these fish, to cast in some of your paste before your hook, for this will make your sport much more abundant: and although the Dace out of his own nature biteth high, and near the top of the water, yet these baits and inticements will make him stoop, and be taken easily.

Of the Carps. If you will angle for the Carp, you must have a strong Rod and a strong Line, of at least seven or nine hairs, and either mixt with green or watchet silk, your cork must be large, long and smooth; your Leads smooth and close, and fixt near the hook, and the hook almost of a three-penny compass. He is very dainty to bite, but at some special hours, as very early in the morning, or very late at night, and therefore he must be very much entised with paste; his best Baits are the Moss-worm, the Red-worm, or the Menew, for he seldome refuseth them. The Cadis-worm is good for him in *June*; and the Maggot, Black-worm or Grashopper, in *July*, *August* and *September*. If you make paste of sour Ale, white of Eggs, and bread-crums, it will very much entice him. Also I would ever wish you before you fish for the Carp, to cast in a handful of white bread chippings into the Pond or River, for they will not only entice him to your bait, but also give you notice if you be near his haunt, for you shall presently hear him smack above the water; and then if you miss him, either your fortune or skill is not good.

Of the Chub, Chevin, or Trout. If you will angle for the Chub, Chevin or Trout, all your instruments must be strong and good; your rod dark and discoloured, your line strong, but small and short, your hook of a two-penny compass: and if you angle with a Flye, then nor lead, nor cork, nor quill; if otherwise, then all of a handsome and suitable proportion.

The best standing to take them, is in close and concealed places, as behind trees, walls, or Arches of Bridges; their haunts are in clear waters, which run upon sand or gravel: and they are in best season, from *March* till *Michaelmas*. If you angle for them with dead Flyes without Lead or Cork, I have shewed you in the former Chapter, the several Flies for each several moneth; but if you angle for them with other baits, then you must have both Cork and Lead, for he will bite near the bottom, yet sometimes you may angle for him with a small Menew, hang'd at your hook by the neather parts, without Cork or Lead, and so draw the bait upon the top of the water; and both with it and with every Flye, strike rather before than after he biteth. If you angle for him at the ground, in *March*, *April*, *May*, and *September*,

tember, the Menew is good bait, so is the Stone-Fly, Cadis-worm, Bob, Red worm, Ditch Canker, young Frogs, the Worm that breedeth on the Ozier leaf, and the Dock-Canker mixt together. In *June*, Crickets and Dor-flies are good. In *July* the Grashopper is good, so is the Humble Bee, dryed Wasps, or dryed Hornets, or any of their young brood in the combs. In *August* flying Pismires are good, so is the Colewort-Worm, or the Maggot. And in *September*, Cherries, Mice before they have any hair, or the great Sow-worm.

Of the Eele.

If you will angle for the Eele, the best place is at Weares, Mill-Ponds, Bridges, hollow Banks, or any swift falling water; your Line strong, and not above 2. Els in length, and very heavily plumb'd, a good round hook, but no cork, because you must not strike till the Eel pluck: neither must you by any means pull hastily, but holding your Line stiff, with Labour and Patience tire him, lest that tearing his chaps, you lose him. The best bait is the Red-worm, or little pieces of sheeps guts.

Of the Flounder and Sewant.

The Flounder and Sewant are greedy biters, yet very crafty; for they will nibble and suck at a bait a good while before they swallow it, and if they perceive the hook, they will flie from it. Therefore to make them more hasty of the bait, you must ever be moving your line, and seldome let it lie still. They lie most commonly in the deepest places of the River, where the water is stillest, and runneth with least force. Also they lie near unto the bank, and delight most in the stream which is brackish, and mixt with the salt water. Your lines must be strong, and well plumb'd near to the hook; and the best bait is the Red Worm, and the young brood of Wasps.

Of the Greyling or Barbel.

The Barbel or Greyling, which some call the Ember, are very subtile and crafty fishes: Therefore you must be very careful that your baits be sweet and new, and when you angle for them, do in all things as you do for the Trout; for they bite aloft in the Summer, and at the bottom in the Winter. Your Lines must be extraordinary strong, and your hooks of a three penny compasse, for they are fishes of weighty bodies, and when they are struck, must have liberty to play and tire themselves, or else they will indanger the breaking of your Rod, and therefore your Line must be of the longest size.

The

The best season to angle for the Bream, is from the later end of *February* till *September*: he is a very lusty strong fish, and therefore your tools must be good: the baits in which he most delighteth is, in Worms of all sorts, Butter-flies, green Flyes, paste of Bread crums, or the brood of Wasps.

Of the Tench. The Tench is a Fish that ever loveth the bottom of Rivers, where the Ooze or Mud is thickest; and is most fit to be angled for, in height of Summer; for at other seasons he is not apt to bite, and at all times he is very dainty.

The Baits in which he delighteth most, are pastes that are very sweet; and the browner the better, especially if it be made with the Blood of a Sheep. At the great Red Worm also he will bite; and so much the sooner, if you mix them with this paste: The Maggot and dryed Wasp he will seldome refuse, chiefly being dipt in Honey.

Of the Bleak, Ruff, and Perch. The Bleak, Ruff, and Perch are Fishes which bite neither high nor low, but for the most part in the midst of the water, therefore your Line must be very lightly plumb'd, and far from the hooks. The Baits which most intice them, besides the Red-worm, is the House-Fly in the Summer, and fat of Bacon in the Winter: In *April* they will bite well at the Bob-worm or Maggot, and in all other seasons they seldome refuse any Worm or Canker. Your Line would be small, and well armed from the hook a hundful, with smaller wier, for the teeth of the Perch will else gnaw it asunder.

Of the Pike. The Pike is a Fish of great strength and weight, insomuch that you can hardly have a Line of hair to hold him; therefore your best Anglers use most commonly a Chalk line; your Angle-rod also must have no small top, but be all of one piece and bigness, and the line made exceeding fast from slipping. Your hook would be of the strongest wier, white or yellow, and made double, the points turning two contrary wayes, and then armed with strong wier a foot at least: his best Bait is a little small Roch, Dace or Menew, the hook being put in at the tail, and coming forth under the gils, and you must seldom or never let your bait lie still in water, but draw it up and down, as though the fish did move in the water, and fled from the Pike, for this will

will make him more eager and hasty to bite: and having bit, you must be sure to tire him well before you take him up.

The yellow live Frog is also an excellent bait for the Pike, for you must understand, that they naturally delight not in any dead or unmoving food.

There be some which take a great deal of delight and pleasure to Snickle or halter the Pike, which is good when Pikes are broke out of Ponds or Rivers, and come into small Ditches or Rundles, as is oft to be seen in low-Countries. The way then to halter them, is first to find the Pike where he lieth (which in the heat of the day you may easily do) then take your Chalk-Line, and making a large running nooze thereof, put it gently into the water, about two feet before the nose of the Pike, then when you feel it touch the ground, cause one to go behind the Pike, and with a pole to stir him, then as he shooteth, meet him with your nooze, and so with a sudden and quick jerk throw him upon the Land. In this sport you must be very ready, nimble, and quick-sighted, for if you give him the least time, he will escape you. Of Snickling the Pike.

Now lastly, touching the angling for the Salmon, albeit he is a Fish which in truth is unfit for your travel, both because he is too huge and cumbersome, as also in that he naturally delighteth to lie in the bottoms of great deep Rivers, and as near as may be in the midst of the channel; yet forasmuch as many men esteem that best which is got with most difficulty, you shall understand that the baits which he most delighteth in, are those which serve for the Trout, as paste or Flies in the Summer; and Red-worms, Bob-worms, or Cankers on the Water-docks after *Michaelmas*. And thus much for the Art of Angling, and taking of each several sort of fish which live in the fresh or brackish waters. Of the Salmon.

CHAP.

CHAP. XV.

Of taking Fish without Angles: And first of laying Hooks.

THe laying of hooks to take fish in the Night, is most commonly used for the Pike, in great broad Waters or Meers, full of Sedges, Bulrushes, and other Weeds, being very deep and muddy: Some do use to lay them for the Eele also, but you shall understand, that if you lay for the Pike, you must by no means let your hook go to the bottom, but with a float keep it half a foot from the ground; but if you lay for Eels, then let your hooks be smaller, and sink as low as they will.

Now for the manner of laying them, you shall bait the hooks as you did when you angled, with Menew, Roch, Dace, Gudgeon, or Millers thumb; and being made fast to strong pack-thread, fasten also that pack-thread to a strong cord, which cord if it be three fadom in length, may hold sixteen or twenty hooks. Then fixing two strong stakes into the earth, fasten the two ends of the big cord to the two stakes, and so let it lie from Sun-set, untill Sun-rise, and you shall never fail, but some of your hooks will have taken. Only observe, if you lay for Pikes, to lay in the midst of the water, near unto the sedge and weeds: but if you lay for Eels, lay very near the banks, so there be no hollow or rotten Trees growing thereon.

Now if you would with these laid hooks take any other sort of Fish, you shall lay such hooks as are fit for them: and before you depart away, cast into the water good store of pellets of those pastes which are proper for the Fishes you would take; as the paste which is made of Bran, Sheeps blood, Garlick, and Lees of Wine, will take all sorts of small fish: that paste which is made of Sheeps Liver, Guts, Hogs blood, Bread crums, and Opopanax, will bring Perch, Tench, Carp or Bream unto your hooks; and that paste which is only made of Rue, Pine-apple kernels, Bean meal and Honey will bring the Salmon, the Trout, Chevin, or Barbels unto your hooks, at all times of the year.

CHAP.

CHAP. XVI.

Of preserving Fish from all sorts of Devourers.

AMongst all the Ravenous Creatures which destroy Fish, there is none more greedy than the Otter, whose only food being thereon, hourly lyeth in wait to consume them: Therefore though some Fisher-men use to take them with a Wheel made with a double tunnel, and called by the name of the Otter-wheel, whose practice is so ordinary, that every Fisher-man knows the use of the same; Yet for a more easie and ready way to destroy him, you shall as near as you can find out his haunt, and the holes that are in the bank, and under the Roots of Trees where he lodgeth, and then take a great Eele, and slitting her back above her navil, put in three or four lumps of *Arsnick*, and then stitch up the skin again, and so lay the Eele from the navil downward in the water, and from the navil upward out of the water: which when the Otter finds, it is his property to eat unto the navil, and no further; which if he do, it is certain that it is the last he will eat.

Next to the Otter, the Hern is a great devourer of Fish, especially the small frye, or that which lives in shallow places: Therefore to destroy the Hern, you shall take a strong Barbell hook, and bait it either with a Menew, or a piece of Doggs flesh, colour your Line green, and lay it in a shallow place made fast to some stake, where the Hern may wade to the knee to take it, and as soon as he hath swallowed it, he shall no more go from the place.

Now for as much as Fowl is a great destruction unto the young Spawn or Fry of Fish, it shall be good for the preservation thereof, to stake down into the bottom of your Ponds good long Kids or Faggots of brush-wood, mixt with the boughs of green Willows, or Oziers, in which the Fish casting their Spawn it will be a defence for them, till they be able to flye into better safety.

Next to the Hern the Water-Rat is a great destroyer of young

fish, especially Trouts, Crevisses, or any that lye in holes in the banks: the best way to destroy them is by hunting them with water Dogs, which is a very good sport, and I have seen twenty kill'd in an afternoon: but some do use to take them with hutches, or dead-falls, set in their haunts: but the former way is the better.

Next them, the Sea-Pye, and Sea-Mew is a great devourer or consumer of Fish, and there is no better way to take him than by setting Rods dresst with water Lime, and set shoring on the edge of the water, one gueſs or row over another, in such places as the Water is most shallow; and upon some tufts of green Weeds, lay a fish for a bait under the Rods, at which he can no sooner strike, but he is presently taken.

Next these, the Kings Fisher (which is a small green Bird) is a great destroyer of Fish, and the way to take him is to mark his haunt where he commonly sitteth, which is ever in some bush next the River: then set a little Cradle of limed straws about his seat, and they will quickly take him, for he seldome changeth, but ever sitteth upon one boagh.

Now to conclude, for the Cormorant, the More-hen, the Bald Coot, or the Ospray, which destroy all kind of Fish whatsoever, there is no way better to kill them, then by watching their haunts, to shoot at them with a Fowling piece, and in the breeding time of the year to destroy their nests.

CHAP. XVII.

Of the Ordering of Ponds for the nourishment of Fish.

THere is nothing that killeth Fish, or maketh them to prosper worse, than putrified and stinking waters: neither is there any thing which corrupteth Water sooner then weeds, Sedge, and such filthiness, being suffered to grow therein; Therefore it shall be good once in three years for to cleanse your Ponds of all manner of Weeds and Filth, which with a small Boat and sharp hook you may easily do at the fall of the leaf, for to cut them in the Spring doth increase them. Now if your Ponds be much subject to mud, as for the most part those in clay Countries are, then it shall

ſhall be good once in ſeven years to drain them, and lade them, and this would be done at the beginning of the Spring; and ſuch Fiſh as you are willing and mean to preſerve, you ſhall put into ſmaller pits or ſtews, and the other diſpoſe at your pleaſure: then cauſing the mud to be trodden with mens feet as you tread morter, you ſhall ſee all the Eeles riſe aloft, which when you have taken alſo, then with ſhovels and trough Spades caſt out all the mud and filth (which is a ſingular compoſt for Land) upon the bank; then fodde the bottom of the Pond and the ſides with green fodds, and fix them hard into the Earth with ſmall ſtakes of Sallow, and theſe ſides will nouriſh the Fiſh exceedingly.

This done, if your Pond have not any freſh Spring in it, then you ſhall lade the water back again into it, and then draining your ſtews, take out your ſtore of Fiſh, and put them again into your Pond, obſerving ever that there be two parts ſpawners; and but a third melters.

Theſe pits and ſmall Stews, howſoever others write to the contrary, are better for feeding of Fiſh, then breeding: therefore you ſhall ever keep them with freſh water, and placing ſo one by another, that you may empty them at pleaſure, once in three months renew their banks and bottomes with freſh foddes of the fruitfulleſt graſs; alſo, you ſhall put into them good ſtore of ſmall Fry of Roch, Dace, Menew, Loch, and Miller-thumbs: for the bigger Fiſh will feed thereon: alſo the inward Garbage and blood of Sheep, Calves, Hoggs, and ſuch like, which will fat fiſh ſuddainly; for you muſt know, that as the Fiſh in Rivers have by vertue of the current ever ſomething brought to them to feed on, ſo the Fiſh which is impriſoned in Ponds and wants that help, muſt either be relieved or elſe periſh; and there is nothing better to feed them with, then that before ſpoken of, or elſe Brewers Grains, chippings, curds, and any Corn whatſoever, thrown into the Ponds Morning and Evening.

CHAP. XVIII.

Of the best Water-Lime.

THe best Water-Lime that can be made, and which will most surely hold within the water, is to take a pound of the strongest Bird-lime, and wash it in nine running Waters, until there be no hardness in it, and then beat out the water clean, and dry it. Which done, put it into an Earthen pot, and adde thereto as much Capons Grease as will make it run, two spoonfuls of strong Vinegar, a very little Lamp Oyl, and Venice Turpentine, and boyl them all gently together upon a soft fire, stirring it continually. Then take it from the fire, and let it cool, then at any time when you mean to use it, warm it, and then anoint either your Rods, Bushes, Straws, or Lines, and no water will take away the strength.

Of

Of the Fighting Cock.

CHAP. XIX.

Of the Choyce, Ordering, Breeding, and Dyeting of the Fighting Cock for Battel.

SInce there is no pleaſure more Noble, Delightſome, or void of couzenage and deceit then this pleaſure of Cocking is; and ſince many of the beſt Wiſdomes of our Nation have been pleaſed to participate with the delights therein, I think it not amiſs, as well for the inſtruction of thoſe which are unexperienced, as fortifying of them which have ſome knowledg therein, to declare in a few Lines the Election, Breeding, and Secrets of dyeting the Fighting Cock, which having been hitherto concealed and unwritten of, is (for our pleaſure ſake) as worthy of a generall Knowledge as any delight whatſoever.

To ſpeak then firſt of the choyce of the Fighting Cock, you ſhall underſtand, That the beſt Characters you can obſerve in him is the Shape, Colour, Courage, and ſharp heel. The choyce of the Cock for the battel.

For his ſhape, the middle and different ſize is ever accounted beſt, becauſe they be ever moſt matchable, ſtrong, nimble, and ready for your pleaſure in his battle: and ſo the exceeding little Cock is as hard to match, and is commonly weak and tedious in his manner of Fighting. He would be of a proud and upright ſhape,

ſhape, with a ſmall head, like unto a Spar-hawk, a quick large Eye, and a ſtrong back, crookt and bigg at the ſetting on, and in colour ſuitable to the plume of his feathers, as black, yellow, or reddiſh. The beam of his legg would be very ſtrong, and according to his Plume, Blew, Gray or Yellow; his ſpurs long, rough, and ſharp, a little bending and looking inward.

For his Colour, the gray pyle, the yellow pyle, or the red with the black breaſt is eſteemed the beſt: the pide is not ſo good, and the white and dun are the worſt. If he be Red about the head, like ſcarlet, it is a ſign of luſt, ſtrength and courage; but if he be pale, it is a ſign of ſickneſs and faintneſs.

For his Courage, you ſhall obſerve it in his walk by his treadding, and the pride of his going, and in his pen by his oft crowing.

For the ſharpneſſe of his heel, or as Cock-maſters call it, the narrow heel, it is only ſeen in his fighting, for that Cock is ſaid to be ſharp heel'd or narrow heeld, which every time he riſeth hitteth, and draweth bloud of his adverſary, gilding (as they term it) his ſpurs in bloud, and threatning at every blow an end of that Battail.

And theſe Cocks are ſurely of great eſtimation, for the beſt Cock-Maſters are of opinion, that a ſharp heel'd Cock, though he be a little falſe, is much better then the trueſt Cock which hath a dull heel, and hitteth ſeldome, for though the one fight long, yet he ſeldome wounds, and the other though he will not endure the uttermoſt hewing, yet he makes a very ſuddain and quick diſpatch of his buſineſs, for every blow puts his adverſary in danger.

But that Cock which is both aſſuredly hard, and alſo very ſharp heeld, he is to be eſteemed, and is of the moſt account above all other, and therefore in your general Election chuſe him which is of a ſtrong ſhape, good colour, true valour, and of a moſt ſharp and ready heel.

The breeding of the battail Cock.

Now for the breeding of theſe Cocks for the battail, it is much differing from thoſe of the dung-hill, for they are like Birds of prey, in which the female is ever to be preferred and eſteemed before

before the Male, and so in the breed in of these Birds, you must be sure that your Hen be right, that is to say, she must be of a right plume, as gray grissel, speckt or yellowish, black or brown is not amiss; she must be kindly unto her young, and of large body, well poked behind for large Eggs, and well tusted on the crown, which shews courage: if she have Weapons she is better, but for her valour it must be excellent, for if there be any sort of cowardise in her, the Chickens cannot be true.

And it is a Note amongst the best breeders, That the perfect Hen from a Dunghill Cock, will bring a good Chicken, but the best Cock from a Dunghill Hen can never get a good bird; and I have known in mine own experience, that the two famousest Cocks that ever fought in these dayes, the one called *Noble*, the other *Grissel*, begot on many ill Hens very bad Cocks; but the most famous Hen *Jinks*, never brought forth ill Bird, how bad soever her Cock were.

Having then unto perfect Cocks got perfect Hens, (for that is the best breeding) you shall know, that the best season of the year to breed in, is from the encrease of the Moon in *February*, to the encrease of the Moon in *March*: for one *March* Bird is ever better worth than three at any other season. You shall place her pen in which she sitteth, to stand warm, and to make her bed of soft and sweet straw, for they be much tenderer then the dunghill hens are; neither shall you suffer any other Fowl to come in her view where she sits, for it will move her to displeasure, and make her to endanger her Eggs.

You shall also observe in her sitting, whether she be busie to turn her Eggs, (which is a good sign in a Hen) and if she be slack, you shall help her at such times as she riseth from her nest, and ever be sure that when she cometh from her nest, to have meat and water ready for her; lest being forced to seek her food, she suffer her Eggs to cool too much. Also, you shall have Sand, Gravel, and fine sifted ashes in the Room where she sitteth, in which she may bath and trim her self, at her pleasure.

After one and twenty dayes is the time of their hatching, and if when they are new hatched, she do neglect to cover and keep the

the first warm till the rest be discloſed, you ſhall obſerve her and take thoſe that are firſt opened, and lapping them in warm Wooll, lay them within the ayr of the fire till the reſt be hatcht, and then put them all under her, and keeping both the Hen and them exceeding warm, for they be ſo tender, that the leaſt cold will kill them, and ſuffer neither them nor the Hen to go abroad into the ayr till they be a moneth old; and let them have ſtore of food, as Oat-meal, Cheeſe-parings, Chilter-wheat, and ſuch like, and a large Room to walk in, the floor being boord; for the earth floor is too moyſt, and the plaiſter-floor too cold.

After they are a moneth old, you ſhall let them walk in ſome graſs Court or green place, where they may have ſtore of Worms, but by all means be ſure there be no ſtinking puddles of water in it; no ſinks, nor filthy Channels, for it is the greateſt poyſon that can be to birds of this nature, and breedeth thoſe Diſeaſes which are moſt mortal: if every morning before they go forth, you perfume them and their Room with Roſemary, or Peny-royal burnt, it is a great preſervation againſt all thoſe infirmities; or to chop Leek blades amongſt their meat is very good alſo.

In this ſort you ſhall nouriſh them till you may diſtinguiſh the Cock-Chicken from the Hen, and then ſeeing their Comb or Wattels but appear, you ſhall cut them away, and ſo anoint the ſore with ſweet Butter till it be whole. This will make them have fine ſmall, ſlender and ſmooth heads, whereas to ſuffer the Comb to grow to his bigneſs, and then cut it away, it will make him a gouty thick head, with great lumps: neither is the Flux of bloud wholſome, for the leaſt loſs of bloud in a feathered Fowl is exceeding mortal, and very dangerous.

You ſhall ſuffer your Cock-Chickens to go together with their Hens till they begin to fight, and peck one at another, but then you ſhall ſeparate them, and diſperſe them into ſeveral walks; and that walk is the beſt for a Fighting Cock which is fartheſt from reſort, as at Wind-Mills or Water-Mills, Grange-houſes and ſuch like, where he may live with his Hens without the

offence

offence or company of other cocks. Lodges in Parks are also good, and so are Cony-Warrens, only they are a litle too much haunted with vermine, and that is dangerous. Let the feeding place for your cocks be upon soft dry ground, or upon boards: for to feed upon paved earth, or on Plaister floors, will make their beaks weak, blunt, and not apt to hold fast. Any white corn is good food for a cock in his walk, and so are tosts or crusts of bread steeped in drink, or mans urine, for it will both scour and coole them inwardly.

If your chickens begin to crow (not being six months old) clear and lowd, or at unseasonable times, do not esteem them, for it is an apparant signe of cowardise and falshood: for the true cock is very long before he get his voyce, and when he hath it, he observes his hours with the best judgment. Unto your fighting cock three hens are sufficient, five are with the most, for they are so hot of nature, and will tread so much, that they soon consume their natural strength.

A cock would not be put to the battel before he be two years old, at which time he is perfect and compleat in every member; for to suffer him to fight when his spurres are but warts, you may well know his courage, but never his goodnesse.

You must also have an especiall care to the Perch whereon your cock sitteth when he roosteth, for if it be too small in the gripe, or crooked, or so ill placed that he cannot sit but he must straddle with his legs, any of these faults wil make uneven heeld and whatsoever he was naturally, yet by this accident he will never be a good striker, for the making of the Perch either maketh or marreth the Cock. Therefore to prevent this fault, the best way is to have in your roost a row of little Perches, not above seven or eight inches in length, and not a foot from the ground, so that your Cock may with ease go up to them, and being set, must of force have his legs stand neer together. It is a rule, that he which is a close sitter, is ever a narrow striker.

Let the footstool of the Perch be round & smooth, and about the bigness of a mans arm. Yet for your better knowledg, because words cannot so well expresse these quantities, it shall not be a-

miss for you to go to some famous Cock-masters house, and view the Perches which are within his feeding Pens, and according to those proportions frame your own; for the Perch is the making and spoyling of any Cock whatsoever.

Again, you must be careful, that when your Cock doth leap from his Perch, that the ground be soft whereon he lighteth, for if it be hard or rough, it will make your Cock grow gowty, and put forth knots upon his feet.

The dyeting of Cocks for the battel.

Now lastly, for the dyeting and ordering of a Cock for a battel, which is a secret never yet divulged, but kept close in the brests of some few; and forasmuch as in it only consisteth all the ground and substance of the pleasure, the best Cock undieted, not being able to encounter with the worst Cock that is dieted, you shall understand, that the time to take up your Cocks, is at the later end of *August*, (for from that time till the later end of *May*, Cocking is in request) and having viewed them well, and seen that they are sound, hard feathered, and full summed, you shall put them into several pens, the models whereof you may behold in every Cock-masters, or Inne-keepers house, having a moving Perch in it, to set at which corner of the Pen you please.

Of taking up Cocks.

Of the Cock-Pen.

This Pen should be made of very close boards well joyned together all but the fore-front, which would be made open like a grate, one bar two inches distant from another; and before the grate, two large troughs of soft wood, one for his meat, the other for his water. The door of the grate should be made to lift up and down, of such largeness, that you may with ease put your Cock in and out, and daily cleanse the Pen to keep it sweet and wholesome.

This Pen would be at least three foot in height, and two foot in square every way, and many of them may be joyned in one front, according to the bigness of the room, in which they are built: and also one above another, only with over-shadowing boards, so that one Cock may not see another.

Of his diet.

When your Cock, as aforesaid, is put up into his Penne, you shall for three or four dayes feed him only with old manchet, the crust pared away, and cut into little square bits, and you shall give

give him to the quantity of a good handfull at a time, and you ſhall feed him three times in a day, that is to ſay, at Sun-riſe, at higheſt noon and at Sun-ſet; You ſhall ever let him have before him the fineſt, coldeſt, and ſweeteſt Spring-water that you can get.

After he hath been thus fed four days, and his Corn, Worms, Gravel, and other courſe feeding gone from him, in the Morning take him out of the Pen, and another Cock alſo, and putting a pair of Hots upon each of their heels, (which hot areſoft bumbaſted rolls of Leather, covering their ſpurs, ſo that they cannot hurt or bruiſe one another,) and ſo ſetting them down on the green graſs, let them fight and baffet one another a good ſpace, as long as in their teaching they do not wound or draw blood one upon another; and this is called the ſparring of Cocks; it heateth and chafeth their bodies, and it breaketh the fat and glut which is within them, and maketh it apt to cleanſe and come away.

After your Cocks have ſparred ſufficiently, and that you ſee them pant, and grow weary, you ſhall take them up, and taking off their Hots, you muſt have deep ſtraw baskets made for the purpoſe, with ſweet ſoft ſtraw to the middle, and then put in your Cock, cover him with ſweet ſtraw up to the top, and then lay on the lid cloſe, and there let your Cock ſtove and ſweat till the Evening.

But yet before you put him into the ſtove, you ſhall take Butter and Roſemary finely chopt, and white Sugar-candy, all mixt together, and give him a lump thereof, as much as your thumb, and then let him ſweat; for the nature of this ſcouring is to bring away his greaſe, and to breed breath and ſtrength. You may in time of neceſſity, for want of theſe ſtraw baskets, ſtow your Cock in a Cock-bag, by laying ſtraw both under and above him, but it is not ſo good, becauſe the Air hath more power to paſs thorow it.

After four of the clock in the Evening, you may take your Cock out of the ſtove, and licking his head and eyes all over with your tongue, put him into his Pen, and then taking a good handful of bread, ſmall cut, put it into his trough, and then piſſing into the trough alſo give it him to eat, ſo as he may take his bread

out of the warm Urine, for this will make his ſcouring work, and cleanſe both his head and body wonderfully.

Now you ſhall underſtand, that the bread which you ſhall give him at this time, and at all other times during his dieting, ſhall not be manchet, but a ſpecial bread made for the purpoſe, in this manner; You ſhall take of Wheat-meal half a peck, and of fine Oat-meal flower as much, and mixing them together, knead them into a ſtiff paſte with Ale, the white of a dozen Eggs, and half a pound of Butter, and having wrought the dowe exceeding well, make it into broad thin cakes, and being three or four dayes old, and the bliſterings of the outſide cut away, cut it into little ſquare bits, and give it the Cock.

There be ſome others that in this bread will mixe Licoras, Anniſeeds, and other hot Spices, and will alſo in the Cock-water ſteep ſlices of Licoras; but it is not commendable, for it is both unnatural and unwholſome, and maketh a cock ſo hot at the heart, that when he comes to the later end of a battle, he is ſuffocated and overcome with his own heat: therefore I adviſe men of judgment, to take that for the beſt diet which is moſt natural, and leaſt contrary unto the fowls ordinary feeding.

But to return to my former diſcourſe, after you have fed your Cock thus for all night, you ſhall the next day let him reſt, and only give him his ordinary feedings of bread and water, then the next day (which is the ſecond day after his ſparring) you ſhall take him into a fair even green Cloſe, and there ſetting him down, having ſome Dung-hill Cock in your arms, you ſhall ſhew it him, and ſo run from him, and entice him to follow you, and ſo chaſe him up and down half an hour at leaſt, ſuffering him now and then to have a ſtroke at the Dung-hill Cock. And when you ſee that he is well heated and panteth, you ſhall take him up and bear him into your Cock-houſe, and there firſt give him this ſcouring: Take of Butter, which hath no ſalt, half a pound, and beat it in a Mortar with the leaves of Herb of grace, Hyſſop, and Roſemary, till the herbs cannot be perceived, and that the Butter is brought to a green Salve, and of this give the Cock a roul

or

or two, as big as your thumb; and then ſtove him in a basket, as is before ſaid, till Evening, and then feed him as was formerly declared.

The next day you ſhall let him reſt and feed, and the next day after, you ſhall ſparre him again: and thus every other day for the firſt fortnight, you ſhall either ſparre or chaſe your Cock, which are the moſt naturalleſt and kindlieſt heats that you can give him, and after every heat you ſhall give him a ſcouring: for this will break and cleanſe from him all greaſe, glut and filthineſs, which lying in his body, makes him purſie, faint, and not able to ſtand out the later end of a battel.

Having fed your Cock thus the firſt fortnight, the ſecond fortnight you ſhall alſo feed him in the ſame manner, and with the ſame food; but you ſhall not ſparre him, or give him heats above twice in a week at the moſt, inſomuch, that thrice or four times in the fortnight will be ſufficient, and each time you ſhall ſtove and ſcour him according to the nature of his heats, that is to ſay, if you heat him much, you ſhall ſtove him long, and give him of your ſcouring the greater quantity; if you find that he is in good breath, and needeth but ſlight heats, then you ſhall ſtove him the leſſe while, and give him the leſſe of the ſcouring.

Now to the third fortnight, which maketh up the ſix Weeks compleat (being a time ſufficient to prepare a Cock for the battail) you ſhall feed him as aforeſaid, but you ſhall not ſparre him at all, for fear of making his head tender or ſore, neither give him any violent exerciſe, but only twice or thrice in the fortnight, moderately let him run and chaſe up and down, to maintain his wind, and now and then cuffe a Cock, which you ſhall hold to him in your hands; which done, you ſhall give him his ſcouring well rounded in the powder of Sugar-Candy, white or brown, but brown is the better, for the Cock then being come to perfect breath, and having no filth in his body for the ſcouring to work on, it will work and cauſe operation upon the vital parts, and make the Cock ſick, which the Sugar-candy will prevent, and ſtrengthen Nature againſt the Medicine.

After

After the end of six weeks feeding, finding your Cock in lust and breath, you may fight him at your pleasure, observing that he have at least three dayes rest before he fight, and well emptied of his meat before you bring him into the Pit.

The matching of Cocks.

Now when you bring him into the Pit to fight, you must have an especial care to the matching of him, for in that art consisteth the greatest glory of the Cock-master, for what availeth it to feed never so well, if in the matching you give that advantage which overthroweth your former labour? Therefore in your matching, there are two things to be considered; that is, the length of cocks and the strength of cocks; for if your Adversary's Cock be too long, yours shall hardly catch his head, and then he can never endanger eye nor life: and if he be the stronger, he will overbear your Cock, and not suffer him to rise, and strike with any advantage: therefore for the knowledg of these two rules, though experience be the best Tutor, yet the first, which is length, you shall judge by your eye, when you gripe the Cock about the waste, and make him shoot out his legs, in which posture you shall see the utmost of his height, and so compare them in your judgment. Now for his strength, which is known by the thicknes of his body, (for that Cock is ever held the strongest, which is the largest in the garth) you shall know it by the measure of your hands, griping the Cock about from the points of your great finger, to the joynts of your thumbs, and either of these advantages by no means give to your adversary; but if you doubt loss in the one, yet be sure to gain in the other: for the weak long Cock will rise at more ease, and the short strong Cock will give the surer blow; so that because all Cocks are not cast into a mould, there may be a reconciliation of the advantages, yet by all means give as little as you can.

Of preparing Cocks to the fight.

When your Cock is equally matcht, you shall thus prepare him to the fight; first, with a pair of fine Cock shears, you shall cut all his main off, close unto his neck, even from his head, unto the setting on of his shoulders; then you shall clip off all the feathers from his tail, close unto his Rump, where the more scarlet that you see in his Rump, in the better estate of body the Cock is. Then you shall take his wings, and spreading them forth

forth by the length of the first feather of his rising wing clip the rest slope wise with sharp points, that in his rising he may therewith endanger the eye of his adversary: then with a sharp knife you shall scrape smooth and sharpen his spurs.

The ordering of Cocks after battail, and the curing thereof.

Lastly, you shall see that there be no feathers about the crown of his head for his foe to take hold on, and then with your spittle, moistning his head all over, turn him into the Pit to move his fortune. When the battail is ended, the first thing you do, you shall search his wounds, and as many as you can find, you shall with your mouth suck the blood out of them, then wash them very well with warm urine, to keep them from ranckling, and then presently give him a roul or two of your best scouring, and so stove him up as hot as you can, both with sweet straw and blanketing, in a close basket for all that night; then in the morning take him forth, and if his head be much swell'd, you shall suck his wounds again, and bath them with warm Urine, then having in a fine bag the powder of the herb *Robert*, well dryed, and finely seirst, pounce all the sore places therewith, and then give the Cock a good handful of bread to eat, out of warm urine, and so put him into the stove again, in the same manner as before mentioned, and by no means let him feel the air untill all the swelling be gone, but twice a day suck his wounds, dresse him and feed him, as is aforesaid.

But if he have received any hurt, or blemish in his eye, then you shall take a leaf or two of right ground Ivy, (not that which runneth along the ground, and is of the ignorant so called, but that which growes in little tufts in the bottome of hedges, and is a little rough leaf,) and having chewed it very well in your mouth, and suckt out the juyce, spit it in the eye of the Cock, and it will not only cure it of any wound, or any blow in the eye, where the sight is not pierced, but also defend it from the breeding of Films, Hawes, Warts, or any such other infirmities which quite destroy the sight: Observing that you do not cease to dress the eye therewith so long as you shall perceive any blemish therein.

Now if your Cock have in his sight veyned himself, either by narrow striking, or other cross blow, you shall find out the wound, and

and presently bind thereunto the fine soft down of a Hare, and it will both staunch it and cure it.

For any other casual infirmity or sickness which shall happen unto Cocks, look in the former Book called *Cheap and Good*, and you shall find them set down at large; only I will give you this one small remembrance, That after you have put forth your wounded Cocks to their walks, and come to visit them a moneth or two after, if you find about their head any swollen bunches, hard and blackish at one end, you shall know that in such bunches are unsound cores; therefore presently with your knife you shall open the same, and crush out the cores with your thumbs, then with your mouth suck out all the corruption, and then fill the holes full of fresh Butter, and it will cure them. And thus much for the nature of the Cock, and how to keep him for his best use.

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FINIS.

THE ENGLISH HOUSE-WIFE

CONTAINING.

The inward and outward Vertues which ought to be in a Compleat Woman:

As her Skill in Physick, Chirurgery, Cookery, Extraction of Oyles, Banqueting stuff, Ordering of great Feasts, Preserving of all sorts of Wines, conceited Secrets, Distillations, Perfumes, ordering of Wool, Hemp, Flax: making Cloth and Dying; the knowledge of Dayries: Office of Malting; of Oats, their excellent uses in Families: of Brewing, Baking, and all other things belonging to an Houshold.

A Work generally approved, and now the Eighth time much augmented, purged, and made most profitable and necessary for all men, and the general good of this *NATION*.

By *G. M.*

LONDON,
Printed by *J. Streater* for *George Sawbridge*, dwelling on *Clerkenwell-Green*. 1668.

TO THE RIGHT

HONOURABLE

And most Excellent Lady,

FRANCES, Countess Dowager of *EXETER*.

HOwsoever, (Right Hounourable and most vertuous Lady) this Book may come to your Noble goodness clothed in an old name or garment, yet doubtless, (Excellent Madam) it is full of many new vertues, which will ever admire and serve you; and though it can adde nothing to your own rare and unparalelled knowledge, yet may it to those noble good ones, (which will indeavour any small spark of your imitation) bring such a light as may make them shine with a great deal of charity. I do not assume to my self, (though I am not altogether ignorant in ability to judge of these things) the full invention, and scope of this whole work: for it is true, great Lady, that much of it was a Manuscript, which many years agone belonged to an Honourable Countess, one of the greatest Glories of our Kingdome, and were the opinions of the greatest Physicians which then lived; which being now approved by one not inferiour to any of

the profession, I was the rather imboldned to send it to your blessed hand, knowing you to be a Mistress so full of Honourable piety and goodness, that although this imperfect offer may come unto you weak and disable, yet your noble vertue will support it, and make it so strong in the world, that I doubt not but it shall do service to all those which will serve you, whilst my self and my poor prayers shall to my last gasp labour to attend you.

The true admirer of your
Noble vertues,

Gervase Markham.

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THE

THE APPROVED BOOK CALLED, The English *House*-wife,

CONTAINING

All the vertuous Knowledges and Actions both of mind and body, which ought to be in any compleat House-wife *of what degree or calling soever.*

The Second BOOK.

CHAP. I.

Of the inward vertues of the mind, which ought to be in every House-wife. And first of her general knowledges both in Physick and Chirurgery, with plain approved medicines for health of the Household; also the extraction of excellent Oyles fit for those purposes.

HAving already in a summary briefness passed through those outward parts of Husbandry which belong unto the perfect Husbandman, who is the Father and Master of the Family, and whose Office and imployments are ever for the most part abroad, or removed from the house, as in the field or yard: It is now meet, that we descend in as orderly a Method as wee can, to the office of our English *House-wife*; who is the Mother and Mistress of

the family, and hath her most generall imployments within the house; where from the generall example of her vertues, and the most approved skill of her knowledge, those of her Family, may both learn to serve God, and sustain man in that godly and profitable sort, which is required of every true Christian.

A House-wife must be religious.

First then to speak of the vertues of her mind, she ought, above all things, to be of an upright and sincere Religion, and in the same both zealous and constant, giving by her example, an incitement and spur, unto all her family to pursue the same steps, and to utter forth by the instruction of her life, those vertuous fruits of good living, which shall be pleasing both to God and his creatures. I do not mean that herein she should utter forth that violence of spirit, which many of our (vainly accounted pure) women do, drawing a contempt to the ordinary Ministry, and thinking nothing lawfull but the fantasies of their own invention, vsurping to themselves a power of preaching and interpreting the Holy Word, to which onely they ought to be but hearers and believers, or at the most but modest persvaders; this is not the office either of good House-wife, or good woman. But let your English Houswife be a godly, constant, and Religious woman, learning from the worthy Preacher and her Husband, those good examples which she shall with all carefull diligence see exercised amongst her Servants.

In which practise of hers, what particular rules are to be observed, I leave her to learn of them who are professed Divines, and have purposely written of this argument; only thus much will I say, which each ones experience will teach him to be true, that the more carefull the master and mistris are to bring up their servants in the dayly exercises of Religion toward God, the more faithfull they should find them in all their businesses towards men, and procure Gods favour the more plentifully on all the houshold: and therefore a small time, morning and evening bestowed in Prayers and other exercises of Religion, will prove no lost time at the weekes end.

She must be temperate.

Next unto her sanctity and Holinesse of life, it is meet that

that our Engliſh Houſwife be a woman of great modeſty and temperance, as well inwardly as outwardly; Inwardly, as in her behaviour and carriage towards her Husband wherein ſhe ſhall ſhun all violence of rage, paſſion and humour, coveting leſs to direct then to be directed, appearing ever unto him pleaſant, amiable, and delightfull; and, though occaſion of miſhaps, or the miſ-government of his will may induce her to contrary thoughts, yet vertuouſly to ſuppreſs them, and with a mild ſufferance rather to call him home from his error, then with the ſtrength of anger to abate the leaſt ſpark of his evill, calling into her mind, that evil and uncomely language is deformed though uttered even to ſervants, but moſt monſtrous and ugly when it appears before the preſence of a Husband: Outwardly, as in her apparel and dyet, both which ſhe ſhall proportion according to the competency of her Husbands eſtate and calling, making her circle rather ſtrait then large: for it is a rule, if we extend to the uttermoſt, we take away increaſe; if we go a haires breath beyond, we enter into conſumption: but if we preſerve any part, we build ſtrong forts againſt the adverſaries of fortune, provided that ſuch preſervation be honeſt and conſcionable: for as laviſh prodigality is bruitiſh, ſo miſerable covetouſneſs is helliſh. Let therefore the Houſewives garments be comely and ſtrong, made as well to preſerve the health, as to adorn the perſon, altogether without toyiſh garniſhes, or the gloſs of light colours, and as far from the vanity of new and fantaſtick faſhions, as neer to the comely imitation of modeſt Matrons. Let her dyet be wholſome and cleanly, prepared at due hours, and Cookt with care and diligence, let it be rather to ſatisfie nature, then her affections, and apter to kil hunger then revive new appetites; let it proceed more from the proviſion of her own yard, then the furniture of the Markets; and let it be rather eſteemed for the familiar acquaintance ſhe hath with it, then for the ſtrangeneſs and rarity it bringeth from other countries.

Of her Garments.

Of her Dyet.

To conclude, our Engliſh Houſwife muſt be of chaſte thoughts ſtout courage, patient, untyred, watchfull, diligent, witty, pleaſant, conſtant in friendſhip, full of good Neighbour-hood, wiſe in Diſcourſe, but not frequent therein, ſharp and quick

Her general Vertues.

of speech, but not bitter or talkative, secret in her affaires, comfortable in her counsels, and generally skilfull in the worthy knowledges which do belong to her vocation; of all, or most whereof, I now in the ensuing discourse intend to speak more largely.

Of her vertues and her knowledge in Physick.

To begin then with one of the most principall vertues which do belong to our English House-wife; you shall understand, that sith the preservation and care of the family touching their health and soundness of body consisteth most in the diligence of her, it is meet that she have a physicall kind of knowledge, how to administer any wholesome receipts or medicines for the good of their healths, as well to prevent the first occasion of sickness, as to take away the effects and evill of the same, when it hath made seisure on the body. Indeed we must confess that the depth and secrets of this most excellent Art of Physick, are far beyond the capacity of the most skilfull woman, as Lodging only in the breast of learned professors, yet that our Housewife may from them receive some ordinary rules and medicines, which may avail for the benefit of her Family, is (in our common experience) no derogation at all to that worthy Art. Neither do I intend here to load her mind with all the Symptomes, accidents, and effects which go before or after every sickness, as though I would have her to assume the name of a Practitioner, but only relate unto her some approved medicines, and old Doctrines which have been gathered together, by two excellent and famous Physitians, and in a Manuscript given to a great worthy Countess of this Land, (for far be it from me to attribute this goodness unto mine own knowledge) and delivered by my common and ordinary experience, for the curing of those ordinary sicknesses which dayly perturb the health of men and women.

Dr. *Barker.*
Dr. *Bomelius.*

Of Feavers in generall.

First then to speak of Feavers or Agues; the House-wife shall know those kinds thereof, which are most familiar and ordinary as the *Quotidian* or dayly Ague, the *Tertian* or every other dayes ague, the *Quartan* or every third days ague, the Pestilent, which keepeth no order in his fits, but is more dangerous and mortal: And lastly, the accidentall Feaver, which proceedeth from the receit or some wound, or other painfull Perturbation

of

of the ſpirits. There be ſundry other Feavers, which coming from Conſumptions and other long continued ſickneſſes, do altogether ſurpaſs our Houſe-wives capacity.

Firſt then for the *Quotidian* (whoſe fits always laſt above twelve hours) you ſhall take a new laid egg, and opening the crown, you ſhall put over the white, then fill up the ſhell with good *Aquavitæ*, and ſtir it and the yolk very well together, and then as ſoon as you feel your cold fit begin to come upon you, ſup up the egg, and either labour till you ſweat, or elſe laying great ſtore of cloths upon you, put your ſelfe in a ſweat in your bed; and thus do while your fits continue; and for your drink, let it be only poſſet ale. Of the Quotidian.

For a ſingle *Tertian* feaver, or each other days ague, take a quart of poſſet ale, the curd being well drained from the ſame, and put thereunto a good handful of *Dandelion*; and then ſetting it upon the fire, boil it till a fourth part be conſumed, then as ſoon as your cold fit beginneth, drink a good draught thereof, and then either labour till you ſweat, or elſe force your ſelf to ſweat in your bed; but labour is much the better, provided that you take not cold after it, and thus do while your fits continue, and in all your ſickneſs, let your drink be poſſet ale, thus boiled with the ſame herb. Of the ſingle Tertian.

For the accidentall Feaver, which cometh by means of ſome dangerous wound received, although for the moſt part it is an ill ſign, if it be ſtrong and continuing, yet many times it abateth, and the party recovereth when the wound is well tended and comforted with ſuch ſeveral balms and hot oyls, as are moſt fit to be applied to the member ſo grieved or injured: therefore in this Feaver you muſt reſpect the wound from whence the accident doth proceed, and as it recovereth, ſo ſhall you ſee the Feaver waſt and diminiſh. Of the accidentall Feaver.

For the *Hectique* Feaver, which is alſo a very dangerous ſickneſs you ſhall take the oyl of Violets, and mix it with a good quantity of the powder of white *Poppy-ſeed* finely ſearſt, and therewith anoint the ſmall and reins of the parties back, evening and morning, and it will not only give eaſe to the Feaver, but alſo purge and cleanſe away the dry ſcalings, which is ingendred either by this, or any other Feaver whatſoever. Of the Feaver hectique.

For

For the quartan or for any fever.

For any feaver whatsoever, whose fit beginneth with a cold, Take a spoonful and a half of Dragon water, a spoonful of of Rose-water, a spoonful of running water, a spoonful of *Aqua vitæ*, a spoonful of Vinegar, and half a spoonful of *Mithridate*, or less, and beat all these well together, and let the party drink it before his fit begin.

Of thirst in fevers.

It is to be understood, that all feavers of what kind soever they be, and these infectious diseases, as Pestilence, Plague, and such like, are thought the inflammation of the blood, and infinitely much subject to drought; so that, should the party drink so much as he desired, neither could his body containe it, nor could the great abundance of drink do other then weaken his stomack, and bring his body to certaine destruction.

Wherefore when any man is so overpressed with desire of drink, you shall give him at convenient times, either posset ale made with cold herbs, as Sorrel, Purslane, Violet leaves, Lettuce, Spinnage, and such like, or else a Julip made as hereafter, in the pestilent feaver, or some Almond milk; and betwixt those times, because the use of these drinks will grow wearisome and loathsome to the patient, you shall suffer him to gargle in his mouth good wholsome beer or ale, which the patient best liketh, and having gargled it in his mouth, to spit it out again, and then to take more: and thus to do as oft as he pleaseth, till his mouth be cooled: provided, that by no meanes he suffer any of the drink to go down; and this will much better asswage the heat of his thirst, then if he did drink; and when appetite desireth drink to go down, then let him take either his Julip or his Almond milk.

For any ague sore.

To make a pultis to cure any ague-sore, take elder leaves, and seeth them in milk till they be soft, then take them up and strain them, and then boil it again till it be thick, and so use it to the sore as occasion shall serve.

The quartane Fever.

For the Quartane Feaver, or third day ague, which is of all Feavers the longest lasting, and many times dangerous Consumptions, black Jaundies, and such like mortal sicknesses follow it: you shall take Mithridate, and spread it upon a Lemon slice, cut of a reasonable thickness, and so as the Lemon be

be covered with the Mithridate; then bind it to the pulſe of the ſick mans wriſt of his arm, about an hour before his fit doth begin, and then let him go to his bed made warm, and with hot cloths laid upon him, let him try if he can force himſelf to ſweat; which if he do, then half an hour after he hath ſwet, he ſhall take hot poſſet-ale brewed with a little Mithridate, and drink a good draught thereof, and reſt till his fit be paſſed over, but it he be hard to ſweat, then with the ſaid poſſet ale, alſo you ſhall mix a few bruiſed Anniſeeds, and that will bring ſweat upon him: and thus you ſhall do every fit, till they begin to ceaſe, or that ſweat come naturally of its own accord, which is a true and manifeſt ſign that the ſickneſs decreaſeth. To make a ſweat.

For the Peſtilent Feaver which is a continuall ſickneſs full of infection and mortality, you ſhall cauſe the party firſt to be let blood, if his ſtrength will bear it: then you ſhall give him cool Julips made of Endive or Succory water: or the ſyrup of Violets, conſerve of Barberies, and the juyce of Lemons well mixed and ſymbolized together. The Peſtilent fever.

Alſo you ſhall give him to drink Almond-milk, made with the decoction of cool herbs, as Violet leaves, ſtrawberry leaves, french mallowes, purſlane, and ſuch like; and if the parties mouth ſhall through the heat of his ſtomack, or liver, inflame, or grow ſore, you ſhall waſh it with the ſyrup of Mulberies, and that will not only heal it, but alſo ſtrengthen his ſtomack. If (as it is moſt common in this ſickneſs) the party ſhall grow coſtive, you ſhall give him a ſuppoſitory made of honey, boyld to the height of hardneſs, which you ſhall know by cooling a drop thereof, and ſo if you find it hard, you ſhall then know that the honey is boyl'd ſufficiently; then put ſalt to it, and ſo put it in water and work it into a roul in manner of a ſuppoſitory, and adminiſter it, and it moſt aſſuredly bringeth no hurt, but eaſe to the party, of what age or ſtrength ſoever he be: during his ſickneſs you ſhall keep him from all manner of ſtrong drinks, or hot ſpices, and then there is no doubt of his recovery.

To preſerve your body from the infection of the plague, you ſhall take a quart of old ale, and after it hath riſen upon the A preſervation againſt the plague.

the fire, and hath been scummed, you shall put thereinto of *Aristolochia longa*, of *Angelica*, and of *Celandine*, of each half a handful, and boyl them well therein; then strain the drink through a clean cloth, and dissolve therein a dram of the best *Mithridate*, as much *Ivory* finely powdered and searst, and six spoonfuls of *Dragon* water, then put it up in a close glass; and every morning fasting, take five spoonfuls thereof, and after bite and chaw in your mouth, the dried root of *Angelica*, or smell on a nosegay, made of the tassell end of a ship rope, and they will surely preserve you from infection.

For infection of the plague. But if you be infected with the plague, and feel the assured signs thereof, as pain in the head, drought, burning, weakness of stomack, and such like: Then you shall take a dram of the best *Mithridate*, and dissolve it in three or four spoonfulls of *Dragon* water, and immediately drink it off, and then with hot cloaths or bricks made extream hot, and laid to the soles of your feet (after you have been wrapt in woollen cloths,) compel your self to sweat, which if you do, keep your self moderately therein, till the sore begin to rise; then to the same apply a live pidgeon cut in two parts, or else a plaister made of the yolk of an egg, hony, herb of grace chopt exceeding small, and wheat flowel, which in very short space will not only ripen, but also break the same without any other incision; then after it hath run a day or two, you shall apply a plaister of *Melilot* unto it, untill it be whole.

For the Pestilence. Take *Fetherfew*, *Males-lot*, *Scabious*, and *Mugwort*, of each a like, bruise them and mix them with old ale, and let the sick drink thereof six spoonfuls, and it will expell the corruption.

other. Take *Yarrow*, *Tansie*, *Fetherfew*, of each a handfull, and bruise them well together, then let the sick party make water in the herbs, then straine them, and give it the sicke to drink.

A preservation against the pestilence. Take of *Sage*, *Rue*, *Brier leaves*, or *Elder leaves* of each an handfull, stamp them and strain them with a quart of white wine, and put thereto a little Ginger, and a good spoonfull of the best *Treacle*, and drink thereof morning and evening.

Take

Take *Smallage*, *Mallowes*, *Wormwood* and *Rue* ſtamp them well together, and fry them in *oyl Olive*, till they be thick, plaiſter-wiſe apply it to the place where you would have it riſe, and let it lie untill it break, then to heal it up, take the juyce of *Smallage*, *Wheat-flower*, and milk, and boile them to a pultis, and apply it morning and evening till it be whole. How to draw the Plague down to any place you will.

Take of *Burrage*, *Langdebeef*, and *Calamint*, of each a good handful, of *Harts tongue*, *Red mint*, *Violets*, and *Marygolds*, of each half a handfull, boyl them in white wine, or fair running water, then add a peny worth of the beſt *Saffron*, and as much *Sugar*, and boyl them over again well, then ſtrain it into an earthen pot, and drink thereof morning and evening, to the quantity of ſeven ſpoonfuls. A Cordial for any infection at the heart.

Take *Linſeed* and *Lettuce*, and bruiſe it well, then apply it to the ſtomack, and remove it once in four hours. Againſt too violent ſweating.

For the Head-ach, you ſhall take of *Roſe-water*, of the juice of *Camomil*, of *Womans milk*, of ſtrong *wine vinegar*, of each two ſpoonfuls, mix them together well upon a chafing diſh of coals; then take a piece of a dry *Roſe cake*, and ſteep it therein, and as ſoon as it hath drunk up the liquor, and is throughly hot, take a couple of ſound *Nutmegs*, grated to powder, and ſtrew them upon the Roſe cake, then breaking it into two parts, bind it on each ſide, upon the temples of the head, ſo let the party lie down to reſt, and the pain will in a ſhort ſpace be taken from him. For the head-ach.

For *Frenzy*, or inflammation of the cauls of the brain, you ſhall cauſe the juyce of *Beets* to be with a Syringe ſquirted up into the patients noſtrils, which will purge and cleanſe his head exceedingly; and then give him to drink poſſet ale, in which *Violet* leaves and *Lettuce* have been boyled, and it will ſuddenly bring him to a very temperate mildneſs, and make the paſſion of the Frenzy forſake him. For the Frenzy.

For the *Lethargy*, or extream drowſineſs, you ſhall by all violent means, either by noiſe or other diſturbances, force perforce keep the party from ſleeping; and whenſoever he calleth for drink, you ſhall give him white wine and *Hyſſop* water, of each a little quantity mixt together, and not ſuffer him to For the Lethargy.

sleep above four hours in four and twenty, till he come to his former wakefulness, which as soon as he hath recovered, you shall then forthwith purge his head with the juyce of *Beets* squirted up into his nostrils, as it is before shewed.

To provoke sleep. But if any of the family be troubled with too much watchfulnesse, so that they cannot by any means take rest, then to provoke the party to sleep, you shall take of *Saffron*, a Dram dryed and beaten to powder, and as much *Lettuce seed* also dryed and beaten to powder, and twice as much *Poppy seed* beaten also to powder, and mix these with womans milk, till it be a thick salve, and then bind it to the temples of the head, and it will soon cause the party to sleep, and let it lie on not above four hours.

For the swimming of the head. For the swimming or dizzines in the head, you shall take of *Agnus castus*, or *Broom wort*, and of *Camomile* dried, of each two drams mixt with the juyce of *Ivy*, oil of Roses, and white wine, of each a like quantity, till it come to a thick salve, and then bind it to the temples of the head, and it will in short space take away the griefe.

For the palsie. For the Apoplexy or Palsie, the strong scent or smell of a Fox is exceeding soveraign, or to drink every morning half a pint of the decoction of Lavender, and to rub the head every morning and evening exceeding hard, with a very clean course cloth, whereby the humours may be dissolved and dispersst into the outward parts of the body: by all means for this infirmity, keep your feet safe from cold or wet, and also the nape of your neck; for from those parts it first getteth the strength of evill & unavoidable pains.

For a new cough. For a cough or cold but lately taken, you shall take a spoonful of Sugar finely beaten and searst, and drop into it of the best *Aqua vitæ*, untill all the Sugar be wet through, and can receive no more moisture: then being ready to lie down to rest, take and swallow the spoonful of Sugar down, and so cover you warm in your bed, and it will soon break and dissolve the cold.

For an old cough, But if the cough be more old and inveterate, and more inwardly fixt to the lungs, take of the powder of Betony, of the powder of Carraway seeds, of the powder of Shervit dried, of the powder of *Hounds tongue*, and of *Pepper* finely beaten

beaten, of each two drams, and mingle them well with clarified *Hony*; make an electuary thereof and drink it morning and evening for nine days together; then take of *Sugar candy* courſly beaten, an ounce of *Licoras* finely pared and trimmed, and cut into very little ſmall ſlices, as much of *Anniſeeds* and *Coriander ſeeds*, half an ounce, mix all theſe together, and keep them in a paper in your pocket, and ever in the day time when the cough offendeth you, take as much of this dredg as you can hold between your thumb and fingers, and eat it, and it will give eaſe to your grief: and in the night when the cough taketh you, take of the juyce of *Licoras*, as much as two good barley corns, and let it melt in your mouth, and it will give you eaſe.

For the falling ſickneſs.

Although the falling ſickneſs be ſeldome or never to be cured, yet if the party which is troubled with the ſame, will but morning and evening, during the wane of the moon, or when ſhe is in the ſign *Virgo*, eat the berries of the herb *Aſperton*, or bear the herbs about him next to his bare skin, it is likely he ſhall find much eaſe, and fall very ſeldome, though this medicine be ſomewhat doubtful.

For the falling evill.

For the falling evill; take, if it be a man, a female *mole*; if a woman, a male *mole*, and take them in *March*, or elſe *April*, when they go to the Buck; then dry it in an oven, and make powder of it whole as you take it out of the earth, then give the ſick perſon of the powder to drink evening and morning for nine or ten days together.

An Oyl to help hearing.

To take away deafneſſe, take a gray Eele with a white belly, and put her into a ſweet earthen pot quick, and ſtop the pot very cloſe with an earthen cover, or ſome ſuch hard ſubſtance, then dig a deep hole in a horſe dunghill, and ſet it therein, and cover it with the dung, and ſo let it remain for a fortnight, and then take it out and clear out the oyl which will come of it, and drop it into the imperfect ear, or both, if both be imperfect.

For the Rheume.

To ſtay the flux of the Rheume, take Sage and dry it before the fire, and rub it to powder, then take bay ſalt and dry it, and beat it to powder, and take a Nutmeg and grate it, and mix them altogether, and put them in a long linnen bag, then heat it upon a tile ſtone, and lay it to the nape of the neck.

For a stinking breath.

For a stinking breath, take Oak buds when they are new budded out, and distill them, then let the party grieved nine mornings, and nine evenings drink of it; then forbear a while, and after take it again.

A vomit for an ill breath.

To make a vomit for a strong stinking breath, you must take of *Antimonium* the weight of three barley corns, and beat it very small, and mix it with conserve of Roses, and give the Patient to eat in the morning, then let him take nine dayes together the juyce of Mints and Sage, then give him a gentle purgation, and let him use the juyce of Mint and Sage longer. This medicine must be given in the spring of the year; but if the infirmity come for want of digestion in stomack, then take *Mints*, *Marjerom* and *Wormwood*, and chop them small, and boyl them in *Malmsie* till it be thick, and make a plaister of it, and lay it to the stomack.

For the tooth-ach.

For the *Tooth-ach*, take a handful of *Daisie-roots*, and wash them very clean, and dry them with a cloth, and then stamp them: and when you have stamped them a good while, take the quantity of half a nut shell full of bay salt, and strew it amongst the roots, and then when they are very well beaten, strain them through a clean cloth; then grate some *Calamus Aromaticus*, and mix it good and stiffe with the juyce of the roots, and when you have done so, put it into a quill, and snuff it up into your nose, and you shall find ease.

Another.

Another for the *Tooth-ach*, take small *Sage*, *Rue*, *Smallage*, *Eetherfew*, *Wormwood*, and *Mints*, of each of them half a handful, then stamp them well altogether, putting thereto four drams of *Vinegar*, and one dram of *Bay salt*, with a penny worth of good *Aquavitæ*, stir them all well together; then pat it between two linnen clouts, of the bigness of your cheek, temples, and jaw, and quilt it in a manner of a course imbroydery: then set it upon a chafing dish of coals, and as hot as you may abide it, lay it over the side where the pain is, and lay you down upon that side, and as it cools warme it againe, or else have another ready warm to lay on.

A drink for a pearl in the eye.

To make a drink to destroy any pearl or film in the eye: take a good handful of Marigold plants: and a handful of Fennel, as much of May-weed, beat them together, then strain them with a

pint

pint of beer, then put it into a pot and ſtop it cloſe, that the ſtrength may not goe out: then let the offended party drinke thereof when he is in bed, and lye on that ſide on which the pearl is, and likewiſe drink of it in the morning next his heart when he is riſen.

For pain in the eyes, take Milk when it comes new from the Cow, and having filled it into a clean veſſel, cover it with a pewter diſh, and the next morning take off the diſh and you ſhall ſee a dew upon the ſame, with that dew waſh the pained eyes and it will eaſe them. For pain in the eyes.

For dim eyes, take Wormwood beaten with the gall of a Bull, and then ſtrain it, and anoint the eyes therewith, and it will clear them exceedingly. For dim eyes.

For ſore eyes, or blood-ſhotten eyes: take the white of an egg beaten to oyle, as much Roſewater, and as much of the juyce of Houſleek, mix them well together, then dip flats, pleagants therein, and lay them upon the ſore eyes, and as they dry, ſo renew them again and wet them; and thus do, till the eyes be well. For ſore eyes.

For watery eyes, take the juyce of *Affodill*, *Mirrhe*, and *Saffron* of each a little, and mix it with twice ſo much white wine, then boyl it over the fire, then ſtrain it and waſh the eye therewith, and it is a preſent help. For watery eyes.

For a Canker, or any ſore mouth; take Chervile and beat it to a ſalve with old Ale and Allom water, and anoint the ſore therewith and it will cure it. For a Canker.

For any ſwelling in the mouth, take the juyce of Wormwood, Camomil, and Shirwit, and mix them with hony, and bath the ſwelling therewith and it will cure it. A ſwelled mouth.

For the Quinſie or Squinancy, give the party to drink the hearb *Mouſe-ear* ſteept in ale or beer, and look where you ſee a Swine rub himſelf, and there upon the ſame place rub a flick-ſtone, and then with it flick all the ſwelling, and it will cure it. For the Quinſie.

If you would not be drunk, take the powder of Betony and Coleworts mixt together; and eat it every morning faſting, as much as will lye upon a ſix pence, and it will preſerve a man from drunkenneſs. Againſt Drunkenneſs.

To

To quicken the Wit.

To quicken a mans wits, spirit, and memory: let him take Langdebeef, which is gathered in *June* or *July*, and beating it in a clean mortar, let him drink the juyce thereof with warm water, and he shall find the benefit.

For the Kings Evil.

If a man be troubled with the *Kings-evil*, let him take the red *Dock*, and seeth it in Wine till it be very tender, then strain it and so drink a good draught thereof, and he shall find great ease from the same; especially if he do continue the use thereof.

Additions to the particular sicknesses; and first of the head and the parts thereof, and the lungs.

Take Frankincense, Doves dung, and Wheat flowre, of each an ounce and mix them well with the white of an Egge, then playsterwise apply it where the pain is.

The oyl of Lillies, if the head be anointed therewith, is good for any pain therein.

Take Rew, and steep it in Vinegar a day and a night, the Rew being well bruised; then with the same anoynt the head twice or thrice a day.

Another For the headach, and to stay bleeding at the Nose.

Take the white of an Egge and beat it to oyl, then put it to Rosewater, and the powder of Alablaster, then take flax and dip it therein, and lay it to the temples, and renew it two or three times a day.

To draw out bones broken in the head.

Take Agrimony and bruise it, and playster-wise apply it unto the wound, and let the party drink the juyce of Betony, and it will expel the bones, and heal the wound.

For the falling of the mould of the head.

Take the leaves of Agrimony, and boyl them in hony, till it be thick like a playster, and then apply it to the wound of the head warm.

The Squinancy.

Take a Table-napkin, or any linnen cloth, and wet it in cold water, and when you go to bed apply it to the swelling, and lye upright; thus do three or four times in a night, till the swelling waste.

The Tooth ach.

Take two or three Dock roots, and as many Daisie roots, and boyl them in water till they be soft, then take them out of the water, and boyl them well over again in Oyle Olive, then strain them through a clean cloth, and anoynt the pained tooth therewith, and keep your mouth close, and it will not onely take away the pain, but also ease any megrim or grief in the head.

To make teeth white.

Take a sawcer of strong Vinegar, and two spoonfulls of the powder

powder of *Roach-allome*, a ſpoonfull of white ſalt, and a ſpoonful of hony: ſeeth all theſe till it be as thin as water, then put it into a cloſe vial and keep it, and when occaſion ſerves waſh your teeth therewith, with a rough cloth, and rub them ſoundly: but not to bleed.

To draw teeth without iron,

Take ſome of the green of the Elder-tree, or the apples of Oak trees, and with either of theſe rub thy teeth and gums, and it will looſen them ſo, as you may take them out.

Teeth that are yellow.

Take Sage and ſalt, of each a like, and ſtamp them well together, then bake it till it be hard, and make a fine powder thereof, then therewith rub the teeth evenings and mornings, and it will take away all yellowneſs.

For teeth that are looſe.

Firſt let them bloud, then take *Harts-horn* or *Ivory*, and red *Pimpernel*, and bruiſe them well together; then put it into a linnen cloth, and lay it to the teeth, and it will faſten them.

For any venome in the ear.

Take the juyce of *Lovage*, and drop it into the ear, and it will cure any venome, and kill any worm, ear-wig, or other vermine.

For a ſtinking breath which cometh from the ſtomach.

Take two ounces of *Cummin*, and beat it in a mortar to fine powder; then boyl it in white wine from a pottle to a quart, then drink thereof morning and evening as hot as you can ſuffer: or otherwiſe, take an ounce of wild *Tyme*, and being clean waſhed, cut it ſmall, and then powder it; then put to it half an ounce of *pepper* in fine powder, and as much *Cummin*, mix them all well together, and boyl them in a pottle of white Wine, till half be conſumed, and after meal (but not before) uſe to drink thereof hot, alſo once in the afternoon, and at your going to bed; and it will purge the breath.

For ſtinking noſthrils.

Take red Nettles and burn them to powder; then adde as much of the powder of Pepper, and mix them very well together and ſnuffe thereof up into the noſe, and thus do divers times a day.

For a Canker in the noſe.

Take old Ale, and having boyled it on the fire, and cleanſed it; adde thereto a pretty quantity of life hony, and as much Allome, and then with a ſerringe or ſuch like, waſh the ſores therewith very warm.

A red water for any canker.

Take a gallon of running water, and boyl it to a pottle; then put

put to it a handful of red Sage, a handful of Celandine, a handful of Hony-suckles, a handful of Woodbine leaves and flowers; then take a pennyworth of Grains made into fine powder, and boyl all very well together: then put to it a quart of the best lifehony of a year old, and a pound of Roch Allom, let all boyl together till it come to a pottle, then strain it and put it into a close vessel, and therewith dress and anoint the sores as occasion serves: it will ease any canker or Ulcer, and cleanse any wound; it is best to be made at *Midsummer*.

To clear the eyes. Take the flowers and roots of *Primroses* clean washt in running water, then boyl them in fair running water for the space of an hour, then put thereto a pretty quantity of white *Copperas*, and then strain all through a linnen cloth, and so let it stand a while and there will an oyl appear upon the water, with that oyl annoynt the lids and the brows of your eyes, and the temples of your head, and with the water wash your eyes, and it is most soveraign.

Another for the sight. Take fifteen seeds of *Juneper*, and as many *Gromwell* seeds, five branches of *Fennel*, beat them altogether, then boyl them in a pint of old Ale, till three parts be wasted; then strain it into a glass, and drop thereof three drops into each eye at night, and wash your eyes every morning for the space of fifteen dayes with your own water, and it will clear any decayed sight whatsoever.

For sore eyes. Take red Snailes, and seeth them in fair water, and then gather the oyl that ariseth thereof, and therewith anoint your eyes morning and evening.

For weak eyes. Take a gallon or two of the dregs of strong Ale, and put thereto a handfull or two of *Cummin*, and as much salt, and then distill it in a Limbeck, and the water is most precious to wash Eyes with.

For bleered eyes. Take Celandine, Rue, Chervile, Plantane, Annise, of each alike and as much *Fennel* as of all the rest, stamp them all well together, then let it stand two days and two nights, then strain it very well and anoynt your eyes morning and evening therewith.

For the pin and web in the eye. Take an egge, and roast it extream hard, then take the white being very hot, and lap in it as much white Copperas as a pease,

peaſe, and then violently ſtrain it through a fine cloth, then put a good drop thereof into the eye, and it is moſt ſoveraign.

Take two drams of prepared Tuſſia, of Sandragon one dram, of Sugar a dram, bray them all well together till they be exceeding ſmall, then take of powder, and blow a little thereof into the eye, and it is ſoveraign. A powder for the pin and web in the eyes.

Take of red Roſe leaves, of Smallage, of Maiden hair, Euface, Endive, Succory, red Fennel, Hil-wort, and Celandine, of each half a quarter of a pound, waſh them clean, and lay them in ſteep in white wine a whole day; then diſtill them in an ordinary Salt: and the firſt water will be like gold, the ſecond like ſilver, and the third like balm; any of theſe is moſt precious for ſore eyes, and hath recovered ſight loſt for the ſpace of ten years, having been uſed but four days. A precious water for the eyes.

Take the leaves of willow, and boil them well in oyl, and therewith anoint the place where you would have hair to grow, whether upon head or beard. To make hair grow.

Take Treacle water and hony, boil them together, and wet a cloth therein, and lay it where you would have hair to grow, and it will come ſpeedily. Another.

Take nine or ten eggs, and roſt them very hard, then put away the yelkes; and bray the whites very ſmall, with three or four ounces of white Copperas, till it be come to perfect oyntment, then with it anoint the face morning and evening, for the ſpace of a week and more. For a pimpled or red ſawcy face.

Take the rind of Hyſſop, and boil or burn it, and let the fume or ſmoak go into the mouth, and it will ſtay any rheume falling from the head. For the rheum.

Take a pint of running water, and three ſpoonfuls of hony, and boyl them together: and ſcum off the filth, then put thereto one ounce of ſmall Raiſins, and ſtrain it well through a cloth, and ſo drink it morning and evening. For hoarſneſs in the throat.

Take Aquavitæ and ſalt, and mix it with ſtrong old Ale, and then heat it on the fire, and therewith waſh the ſoles of the feet when you go to bed. For a dangerous cough.

Take of clean wheat, and of clean barley, of each a like quantity, and put them into a gallon and a half of fair water, and boil For a dry cough.

them till they burſt, then ſtrain it into a clean veſſel, and add thereto a quartern of fine *Lycoras* powder, and two peny worth of *gumme Arabick*, then boyl it over again and ſtrain it, and keep it in a ſweet veſſel, and drink thereof morning and evening.

For the Priſick. Take the beſt wort, and let it ſtand till it be yellow, then boyl it, and after let it cool, then put to it a little quantity of *Barm* and *Saffron*, and ſo drink of it every morning and evening while it laſteth: otherwiſe, take *Hore hound*, *Violet leaves*, and *Hyſſop* of each a good handfull, ſeeth them in water, and put thereto a little *Sugar*, *Lycoras*, and *Sugar-candy*, after they have boiled a good while, then ſtrain it into an earthen veſſel, and let the ſick drink thereof ſix ſpoonfuls at a time morning and evening; or laſtly, take the lungs of a Fox, and lay it in roſe water, or boyl it in roſe water, then take it out, and dry it in ſome hot place without the ſun; then beat it to powder with *Sugar candy*, and eat of this powder morning and evening.

For griefs in the ſtomach. To eaſe the pain in the ſtomach, take *Endive*, *Mints*, of each a like quantity, and ſteep them in white wine a days ſpace; then ſtraining and adding thereunto a little *Cynnamon* and *Pepper*, give it to the ſick perſon to drink, and if you add thereto a little of the powder of *Horſe mint* and *Calamint*, it will comfort the ſtomach exceedingly, and occaſion ſwift and good digeſtion.

For ſpitting of blood. For ſpitting of blood, whether it proceed of inward bruiſes, over-ſtraining, or ſuch like; you ſhall take ſome *pitch*, and a little *Sperma Cæti*, and mix it with old Ale, and drink it, and it will ſtay the flux of blood: but if by means of the bruiſe, any outward grief remain; then you ſhall take the herb *Brokelhemp*, and frying it with ſheeps tallow, lay it hot on the grieved place, and it will take away the anguiſh.

For vomiting. To ſtay the flux or vomiting, take *Wormwood*, and ſowr bread toſted, of each a like quantity, and beat them well in a mortar; then add to them as much of the juice of *Mints*, and the juice of *Plantane*, as will bring it to a thick ſalve: then fry them altogether in a frying pan, and when it is hot, lay it plaiſterwiſe to the mouth of the ſtomach; then let the party drink a little white wine and *Chervile* water mixt together, and then ſteep ſowr toaſted bread in very ſtrong vinegar, wrap it in a fine cloth, and

let

let the ſick party ſmell thereto, and it will ſtay the exceſſe of vomiting, and both comfort and ſtrengthen the ſtomach.

If you would compel one to vomit, take half a ſpoonfull of Stone crop, and mix it with three ſpoonfuls of white wine, and give it to the party to drink, and it will make him vomit preſently; but do this ſeldome, and to ſtrong bodies, for otherwiſe it is dangerous. To force one to vomit.

For the *Iliaca paſſio*, take of Polypody an ounce, and ſtamp it; then boyl it with Prunes and Violets, in Fennel water, or Anniſeed water; take thereof a good quantity; then ſtrain it, and let the party every morning and evening drink a good draught thereof. For the Iliaca paſſio.

If the ſtomach be troubled with wind or other pain, take Cummin, and beat it to powder, and mixe with it red wine, and drink it at night when you go to bed divers nights together. Additions to the diſeaſes of the ſtomach.

Take Brooklime-root and leaves, and waſh them clean, and dry them in the ſun, ſo dry, that you may make powder thereof, then take of the powder a good quantity, and the like of Treacle, and put them in a cup, with a pretty quantity of ſtrong old Ale, and ſtir them well together, and drink thereof firſt and laſt, morning and evening, for the ſpace of three or four dayes; and if need do require, uſe the ſame in the broths you do eat, for it is very ſoveraign. For the ſtomach. For the Iliaca paſſio.

Take Harts-horn, or Ivory beaten to fine powder, and as much Cynnamon in powder, mix them with Vinegar, and drink thereof, to the quantity of ſeuen or eight ſpoonfuls. For pain in the breaſt.

Take the water of Mouſeare, and drink thereof the quantity of an ounce and a half, or two ounces, twice or thrice a day: or otherwiſe take a little Nutmeg, a little Cloves, a little Mace, and a very little Ginger, and the flowers of Lavender, beat all unto a fine powder, and when the paſſion of the Mother cometh, take a chafingdiſh of good hot coals, and bend the patient forward, and caſt of the powder into the chafingdiſh, ſo as ſhe may receive the ſmoak both in at her noſe and mouth, and it is a preſent cure. The mother.

Againſt obſtructions in the Liver, take Anniſeeds, Ameos, Burnet, Camomile, and the greater Centaury, and boyl them in white Obſtructions of the Liver.

wine with a little honey, and drink it every morning, and it will cure the obstructions, and cleanse the Liver from all imperfection.

Against the heat of the Liver.

Against the heat and inflammation of the Liver, take Endive dryed to powder, and the meal of *Lupine* seeds, and mix it with Hony, and the juyce of Wormwood, make a cake thereof, and eat it, and it will assuage the great heat and inflammation of the Liver, and take away the pimples and redness of the face, which proceedeth from the same.

For the Pleurisie.

To prevent a pleurisie a good while before it come, there is no better way then to use much the exercise of ringing, or to stretch your arms upward, so as they may bear the weight of your body, and so swing your body up and down a good space; but having caught a Pleurisie, and feeling the gripes, stitches, and pangs thereof, you shall presently cause the party to be let blood, and then take the herb *Althea*, of Holyhock, and boyl it with Vinegar and Linseed, till it be thick plaister-wise, and then spread it upon a piece of Allom-leather, and lay it to the side that is grieved, and it will help it.

A playster for a stitch.

To help a stitch in the side, or elsewhere, take Doves dung, red Rose leaves, and put them into a bag, and quilt it: then throughly heat it upon a chafingdish of coals, with vinegar in a platter: then lay it upon the pained place, as hot as may be suffered, and when it cooleth heat it again.

Heat in the Liver.

For any extraordinary heat or inflammation in the Liver, take Barberies, and boyl them in clarified whey, and drink them and they will cure it.

For the consumption.

If you will make a Cordiall for a Consumption, or any other weakness, take a quart of running water, a piece of Mutton, and a piece of Veal, and put them with the water into a pot; then take of Sorrel, Violet leaves, Spinage, Endive, Succory, Sage, Hyssop, of each a good quantity; then take Prunes and Raisins and put them all to the broth, and seeth them from a quart to a pint; then strain the yelk of an egg, and a little Saffron thereinto, putting in Sugar, whole Mace, and a little white wine; so seeth them a while together, and let the party drink it as warm as may be.

To staunch blood.

To staunch blood, take the herb Shepherds purse, (if it may be gotten) distilled at the Apothecaries, and drink an ounce thereof at a time, morning and evening, and it will stay any flux of

of blood naturall or unnaturall, but if you cannot get diſtilled water, then boyl a handfull of the herb with Cynnamon, and a little Sugar, in Claret wine, and boyl it from a quart to a pint, and drink it as oft as you pleaſe: alſo, if you do but rub the herb between your hands, you ſhall ſee it will ſoon make the blood return.

For the yellow jaundiſe.

For the Yellow Jaundiſe, take two penny worth of the beſt Engliſh Saffron, dry it and grind it to exceeding fine powder; then mix it with the pap of a roſted Apple, & give it the diſeaſed party to ſwallow down in manner of a pill, and thus do divers mornings together, and without doubt, it is the moſt preſent cure that can be for the ſame, as hath been often times proved.

For the Yellow Jaundiſe, take Pimpernel and Chick weed, ſtamp them and ſtrain them into poſſet Ale; and let the party drink thereof morning and evening.

For the yellow Jaundiſe, which is deſperate, and almoſt paſt cure: Take ſheeps dung new made, and put it into a cup of beer or ale and cloſe the cup faſt, and let it ſtand ſo all night, and in the morning take a draught of the cleereſt of the drink, and give it unto the ſick party.

For the Black jaundiſe.

For the Black Jaundiſe, take the hearb called Penny royall, and either boyl it in white Wine, or drink the juyce thereof ſimply by it ſelf, to the quantity of three or four ſpoonfuls at a time, and it will cure the black Jaundiſe.

Additions for the diſeaſes of the Liver.

Take of Hyſſop, Parſley, and Harts-tongue, of each a like quantity, and ſeeth them in wort till they be ſoft, then let it ſtand till it be cold, and then drink thereof firſt and laſt, morning and evening.

For waſting of the Liver.

Take Fennel roots, and parſly roots of each alike, waſh them clean and pill off the upper bark, and caſt away the pith within; then mince them ſmall; then put them to three pints of water, and ſet them over the fire; then take figs and ſhred them ſmall, take Lycoras and break it ſmall, and put them to the herbs, and let all boyl very well, then take Sorrell and ſtamp it and put it to the reſt, and let it boyl till ſome part be waſted, then take a good quantity of hony and put to it and let it boyl a while, then take it from the fire, and clarify it through a ſtrainer into a glaſs veſſel, and ſtop it very cloſe; then give the ſick to drink

thereof

thereof morning and evening.

To heal a Ring-worm coming of the heat of the Liver.

Take the ſtalk of Saint *Mary Garlick*, and burn it, or lay it upon a hot tyle ſtone untill it be very dry, and then beat it into powder, and rub the ſore therewith untill it be whole.

To ſtanch blood.

Take Wool in the Walkmill that cometh from the cloth and flyeth about like Doun and beat it into powder; then take thereof and mix it with the white of an egge and wheat flowre, and ſtamp them together: then lay it on a linnen cloth or lint, and apply it to the bleeding place, and it will ſtaunch it.

For great danger in bleeding.

If a man bleed and have no preſent help, if the wound be on the foot, bind him about the ankle; if in the legs, bind him about the knee, if it be on the hand, bind him about the wriſt; if it be on the arm, bind him about the brawn of the arm, with a good liſt and the blood will preſently ſtanch.

For a ſtitch.

Take good ſtore of *Cinnamon* grated, and put it into poſſet ale very hot and drink it, and its a preſent cure.

A bath for the Leproſie.

Take a gallon of running water; and put to it as much ſalt as will make the water as ſalt as the Sea-water, then boyl it a good while, and bath the legs therein as hot as may be ſuffered.

For the Dropſie.

For the Dropſie, take *Agnus caſtus*, *Fennel*, *Affodil*, dark *Wallwort*, *Lupins* and *Wormwood*, of each a handfull, and boyl them in a gallon of white Wine untill a fourth part be conſumed: then ſtraine it and drink it morning and evening half a pint thereof, and it will cure the Dropſie; but you muſt be carefull that you take not *Daffodil* for *Affodil*.

Pain in the Spleen.

For pain in the Spleen, take *Agnus caſtus*, *Agrimony*, *Aniſeeds*, *Centaury* the great, and *Wormwood*, of each a handful, and boyle them in a gallon of white Wine, then ſtrain it, and let the patient drink divers mornings together half a pint thereof; and at his uſual meals let him neither drink Ale, Beer, nor Wine, but ſuch as hath had the hearb *Tamariſk* ſteeped in the ſame, or for want of the herb, let him drink out of the cup made of *Tamariſk* wood and he ſhall find remedy.

Pain in the Liver.

For any pain in the ſide, take *Mugwort* and red *Sage*, and lay them between two tyle ſtones, and then put it into a bag, and lay to your ſide as hot as can be indur'd.

For fatneſs and ſhort breath.

To help him that is exceeding fat, purſie, and ſhort breathed: take hony clarified, and bread unleavened, and make toaſts of it,

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and dip the toaſt in the clarified honey, and eat this divers mornings with your meat.

Take a lump of Iron or Steel and heat it red hot, and quench it in Wine, and then give the wine to the ſick party to drink. Additions. To the diſeaſes of the Spleen.

Take *Fennel ſeeds* and the roots, boyl them in water, and after it is cleanſed put to it honey, and give the party to drink; then ſeeth the herb in Oyl and Wine together, and playſterwiſe apply it to the ſide. For ſtopping of the ſpleen.

Make a playſter of *Wormwood* boyled in Oyle, or make an oyntment of the juyce of *Wormwood*, of *Vinegar*, *Armoniack*, *Wax*, and *Oyl*, mixed and melted together, and anoynt the ſides therewith, either in the Sun, or before the fire. Diſeaſes of the heart.

Take the powder of *Galingal*, and mix it with the juyce of *Burrage*, and let the offended party drink it with ſweet wine. For paſſion of the heart.

Take *Roſemary* & *Sage*, of each a handful, & ſeeth them in white Wine or ſtrong Ale, and then let the patient drink it luke-warm. For heart ſickneſs.

Take the juyce of *Fennel* mixt with hony, and ſeeth them together till it be hard, and then eat it evening and morning, and it will conſume the fatneſs. For fatneſs about the heart.

For the *Wind collick*, which is a diſeaſe both generall, and cruel, there be a world of remedies, yet none more approved than this which I will repeat: you ſhall take a *Nutmeg* ſound and large, and divide it equally into four quarters: the firſt morning aſſoon as you ſhall riſe, eat a quarter thereof; the ſecond morning two quarters, and the third eat three quarters, and the fourth morning eat a whole *Nutmeg*; and ſo having made your ſtomach and taſte familiar therewith, eat every morning whilſt the *Collick* offendeth you, a whole *Nutmeg* dry without any compoſition, and faſt ever an hour at leaſt after it, and you ſhall find a moſt unſpeakable profit which will ariſe from the ſame. For the wind Collick.

For the *Wind collick*, take a good handful of clean Wheat-meal as it cometh from the mill, and two eggs, and a little *Wine-vinegar*, and a little *Aquavitæ*, and mingle them together cold, and make a cake of it, and bake it on a gridyron with a ſoft fire, and turn it often and tend it with baſting of *Aquavitæ* with a feather; then lay it ſomewhat higher then the pain is, rather then lower. The wind Collick.

For the *Lask* or extreame ſcouring of the belly, take the ſeeds of For the Lask.

of the Wood-rose, or Bryer-rose, beat it to powder, and mix a dram thereof with an ounce of the conserve of sloes, and eat it and it will in a short space bind and make the belly hard.

For the bloody flux. For the bloody-flux, take a quart of red wine, and boyl therein a handful of Shepheards purse, till the hearb be very soft: then strain it, and add thereto a quarter of an ounce of Cynnamon, and as much of dryed Tanners bark taken from the Ouze, and both beaten to fine powder; then give the party half a pint thereof to drink morning and evening, it being made very warm, and it will cure him,

To stay a lask. To stay a sore Lask, take Plantane water and Cynnamon finely beaten, and the flowres of Pomgranates, and boyl them well together; then take Sugar and the yelk of an egg, and make a candle of it, and give the grieved party it.

For the flux. For the Flux take Stags pizzel dryed and grated, and give it in a drink, either in Beer, Ale, or Wine, and it is most soveraign for any Flux whatsoever. So is the jaw bones of a Pike, the teeth and all dryed and beaten to powder, and so give the party diseased in any drink whatsoever.

For the worst Flux. To cure the worst bloody-flux that may be, take a quart of red wine, and a spoonfull of Cummin seed, boyl them together untill half be consumed; then take Knot-grass and Shepheards purse and Plantane, and stamp them severall, and then strain them and take of the juyce of each of them a good spoonfull and put them to the wine, and so seeth them again a little: then drink it lukewarm, half over night, and half the next morning; and if it fall out to be in Winter, so that you cannot get the herbs, then take the water of the herbs distilled, of each three spoonfulls, and use it as before.

For costiveness. For extream costiveness, or binding in the body, so as a man cannot void his excrements; take Anniseeds, Fenugreek, Linseeds, and the powder of Piony: of each half an ounce, and boyl them in a quart of white Wine, and drink a good draught thereof, and it will make a man go to the stool orderly, and at great ease.

For worms. For worms in the belly, either of child or man, take Aloes Cicotrine, as much as a half hazel Nut, and wrap it in the pap of a roasted Apple, and so let the offended party swallow it in the manner

manner of a pill faſting in the morning, or elſe mix it with three or four ſpoonfulls of Muskadine, and ſo let the party drink it, and it is a preſent cure. But if the child be either ſo young or the man ſo weak with ſickneſs, that you dare not adminiſter any thing inwardly, then you ſhall diſſolve your Aloes in the oyle of Savine, making it thick like ſalve, then playſterwiſe ſpread it upon Sheeps leather, and lay it upon the navil and mouth of the Stomach of the grieved party, and it will give him eaſe; ſo will alſo unſet Leeks chopt ſmall and fryed with ſweet butter, and then in a linnen bag applyed hot to the navil of the grieved party.

Take a quart of red wine, and put to it three yelks of eggs, and a pennyworth of long Pepper and grains, and boyl it well, and drink it as hot as can be ſuffered: or otherwiſe, take an ounce of the inward bark of an oak, and a pennyworth of long Pepper, and boyl them in a pint and better of New Milk, and drink it hot firſt and laſt morning and evening. Additions to the diſeaſes of the belly and guts. For the greateſt Lax.

Take an egge, and make a little hole in the top, and put out the white, then fill it up again with Aquavitæ, ſtirring the egge and Aquavitæ, till it be hard, then let the party eat the egg and it will cure him; or otherwiſe take a pint of red wine and nine yelks of eggs, and twenty Pepper corns ſmall beaten, let them ſeeth untill they be thick, then take it off, and give the diſeaſed party to eat nine ſpoonfuls morning and evening. For the bloody flux.

Take of Rue and Beets a like quantity, bruiſe them, and take the juyce, mix it with clarified hony, and boyl it in red wine, and drink it warm firſt and laſt morning and evening. For an eaſie Lask.

Take Mercury, Cinkfoyl, and Mallows, and when you make pottage or broth with other herbs, let theſe herbs before named have moſt ſtrength in the pottage, and eating thereof, it will give you two ſtools and no more. To have two ſtools a day and no more.

Take two ſpoonfuls of the juyce of Ivy leaves, and drink it three times a day, and it will diſſolve the hardneſs. for hardneſs of the belly or womb.

Take the bark of the roots of the elder tree, and ſtamp it, and mix it with old Ale, and drink thereof a good hearty draught. Againſt coſtiveneſs.

Take the crums of white bread, and ſteep it in Milk with Allom, and Sugar unto it and eat it, and it will open the belly. For the wind collick.

For the ſtopping of the womb.

Take the Kernels of three Peach ſtones, and bruiſe them, ſeven corns of caſe pepper, and ſliced ginger a greater quantity then of the pepper, pound all together groſly, and put it into a ſpoonfull of Sack (which is beſt) or elſe white Wine, or ſtrong Ale, and drink it off in a great ſpoon, then faſt two hours after, and walk up and down if you can; if otherwiſe, keep your ſelfe warm and beware.

For the Rupture.

Take of *Daiſies*, *Cumfrey*, *Polipody* of the Oak, and Avens of each half a handfull, two roots of *Oſmund*, boyl them in ſtrong Ale and Honey, and drinke thereof morning, noone, and night, and it will heale any reaſonable rupture. Or otherwiſe take of *Smallage*, *Cumfrey*, *Setwell*, *Polypody*, that grows on the ground like *fearn*, *daiſies*, and *mores*, of each alike, ſtamp them very ſmall, and boyl them well in Barm, untill it be thick like a poultis, and ſo keep it in a cloſe veſſel, and when you have occaſion to uſe it, make it as hot as the party can ſuffer it, and lay it to the place grieved, then with a truſſe, truſs him up cloſe, and let him be very carefull for ſtraining himſelf, and in a few dayes it will knit: during which cure, give him to drink a draught of red wine, and put therein a good quantity of the flowre of fetches, finely boulted, ſtirring it well together, and then faſt an houre after.

For the Stone.

For the violent pain of the ſtone, make a poſſet of milke and ſack, then take off the curd, and put a handfull of *Cammomil* flowrs into the drink, then put it into a pewter pot, and let it ſtand upon hot embers, ſo that it may diſſolve; and then drink it as occaſion ſhall ſerve. Otherwiſe for this grief, take the ſtone of an Oxe gall, and dry it in an Oven, then beat it to powder, and take of the quantity of a hazel nut, with a draught of good Ale, or white wine.

Another.

The Collick and ſtone.

For the Collick and ſtone, take Hawthorn berries, the berries of ſweet Bryers, and aſhen Keyes, and dry them every one ſeverally until you make them into powder, then put a little quantity of every one of them together, then if you think good, put to it the powder of *Licoras* and *Anniſeeds*, to the intent the party may the better take it, then put in a quantity of this powder in a draught of white wine, and drink it faſting. Otherwiſe you may take *Smallage-ſeed*, *Parſley*, *Lovage*, *Saxifrage*, and *broom-ſeed*, of each

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each of them a little quantity, beat them into a powder, and when you feel a fit of either of the diſeaſes, eat of this powder a ſpoonful at a time either in pottage, or elſe in the broth of a chicken, and ſo faſt two or three hours after.

A powder for the Collick and Stone.

To make a powder for the collick and ſtone, take *fennel*, *parſly-ſeed*, *anni-ſeed*, and *caraway-ſeed*, of each the weight of ſix pence, of *grummel ſeed*, *ſaxifrage ſeed* the roots of *Ilapendata* and *Licoras*, of each the weight of twelve pence, of *galingal*, *ſpikenard*, and *Cinamon* of each the weight of eightpence, of *Sena* the weight of ſeventeen ſhillings good weight, beat them all to powder and ſearſe it, which will weigh in all twenty five ſhillings and ſix pence. This powder is to be given in white wine and ſugar in the morning faſting, and ſo to continue faſting two hours after; and to take of it at one time the weight of ten pence, or twelve pence.

Another.

Other Phyſitians for the ſtone, take a quart of Rheniſh or white wine, and two lemons, and pare the upper rind thin, and ſlice them into the wine, and as much white ſoape as the weight of a groat, and boyl them to a pint, and put thereto ſugar according to your diſcretion and ſo drink it, keeping your ſelf warm in your bed, and lying upon your back.

For the ſtone in the reins.

For the ſtone in the reyns, take *Ameos*, *Cammomil*, *Maiden hair*, *Sparrow-tongue* and *Philipendula*, each alike quantity, dry it in an oven, and then beat it to powder, and every morning drink half a ſpoonful thereof with a good draught of white wine, and it will help.

For the ſtone in the bladder.

For the ſtone in the bladder, take a raddiſh root and ſlit it croſs twice, then put it into a pint of white wine and ſtop the veſſel exceeding cloſe: then let it ſtand all one night, and the next morning drink it off faſting, and thus do divers mornings together, and it will help.

A powder for the ſtone in the bladder.

For the ſtone in the bladder, take the kernels of ſloes, and dry them on a tile ſtone, then beat them into powder, then take the roots of *Alexander*, *Parſly*, *Pellitory*, and *Holihock*, of every of their roots a like quantity, and ſeeth them all in white wine, or elſe in the broth of a young chicken: then ſtrain them into a clean veſſel, and when you drink of it, put into it half a ſpoonfull of the powder of ſloe kernels. Alſo if you take the oyle of

Scorpion, it is very good to anoint the members, and the tender parts of the belly against the bladder.

A bathe for the stone. To make a bath for the stone, take mallows, holihock, and lilly roots, and linseed, Pellitory of the wall, and seeth them in the broth of a Sheeps head, and bathe the Reines of the back therewith oftentimes, for it will open the straitness of the water conduits, that the stone may have issue and assuage the pain, and bring out the gravell with the Urine: but yet in more effect, when a playster is made and laid upon the reins and belly immediately after the bathing.

A water for the stone. To make a water for the stone, take a gallon of new milk of a Red Cow, and put therein a handful of Pellitory of the wall and a handful of wild thyme, and a handful of *Saxifrage*, and a handful of *Parsly*, and two or three Radish roots sliced, and a quantity of *Philipendula* roots; let them lye in the milk a night, and in the morning put the milk with the herbs into a still, and distill them with a moderate fire of Charcole or such like: then when you are to use the water, take a draught of Rhenish wine or white Wine, and put into it five spoonfuls of the distilled water, and a little Sugar and Nutmeg sliced, and then drink of it, the next day meddle not with it, but the third day doe as you did the first day, and so every other day for a weeks space.

Difficulty of Urine. For the difficulty of Urine, or hardness to make water, take Smallage, Dill, Anniseeds, and Burnet, of each a like quantity, and dry them and beat them to fine powder and drink half a spoonfull thereof, with a good draught of White wine.

For hot Urine. If the Urine be hot and burning, the party shall rise every morning to goe to drink a good draught of new Milke and Sugar mixt together, and by all means to abstain from Beer that is old, hard and tart, and from all meats and sawces which are sowr and sharp.

For the Strangullion. For the Strangullion, take Saxifrage, Polypody of the Oak; the roots of beans, and a quantity of Raisins, of every one three handfulls or more, and then two gallons of good Wine, or else Wine lees, and put it into a Serpentary, and make thereof a good quantity, and give the sick to Drink Morning and Evening a spoonfull at once.

For

For them that cannot hold their water in the night time, take Kids hoof, and dry it, and beat it into powder, and give it to the patient to drink, either in beer or ale four or five times over. For piſſing in bed.

For the rupture or burſtenneſſe in men; take Comfrey and *Ferne-oſmund*, and beat them together, and yellow waxe, and Dears ſuet, untill it come unto a ſalve, and then apply it unto the broken place, and it will knit it; alſo it ſhall be good for the party to take Comphry roots, and roſt them in hot embers, as you roſt wardens, and let the party eat them: for they are very ſoveraign for the rupture; eſpecially being eaten in a morning faſting; and by all means let him wear a ſtrong truſſe, till it be whole. For the rupture.

Take Goats claws and burn them in a new earthen pot to powder, then put of the powder into broth or pottage, and eat it therein: or otherwiſe take Rue, Parſley, and Gromwell, and ſtamp them together, and mix it with wine and drink it. Additions to the diſeaſes of the reins and bladder.

Take *Agnus caſtus*, and *Caſtoreum*, and ſeeth them together in wine, and drink thereof; alſo ſeeth them in vinegar, and lap it hot about the privy parts, and it will help. For him that cannot hold his water.

Take Malmſey and butter, and warm it, and waſh the reins of the back, whereupon you find pain, then take oyl of Mace, and anoint the back therewith. For the Gonorrhea, or ſhedding of ſeed.

Firſt waſh the reins of the back with warm white wine, then anoint all the back with the ointment called Perfluane-to. For weakneſs in the back.

Take a leg of beef, a handful of Fennel roots, a handful of Parſly roots, two roots of Comfry, one pound of Raiſins of the Sun, a pound of damask Prunes, and a quarter of a pound of Dates, put all theſe together, & boyl them very ſoft, with ſix leaves of Nep, ſix leaves of Clary, twelve leaves of Bittany of the wood, and a little Harts tongue: when they are ſod very ſoft, take them into the ſame broth again, with a quart of ſack, and a penniworth of large mace, and of this drink at your pleaſure. For heat in the reins. For comforting and ſtrengthning of the backe.

For the Hemorrhoids, which is a troubleſome and ſore griefe, take of Dill, Dog-fennel, and Pellitory of Spain, of each halfe a handfull, and beat it in a mortar with Sheeps ſuet and black Soap, till it come to a ſalve, and then plaiſter-wiſe, apply it to the For the hemorrhoids.

the sore, and it will give the grief ease.

For the piles or hemorhoids.

For the Piles or Hemorrhoids, take half a pint of ale, and a good quantity of Pepper, and as much Allom as a Walnut; boyl all this together till it be as thick as birdlime, or thicker; this done, take the juyce of white Violets, and the juyce of Housleek, and when it is almost cold, put in the juyce, and strain them altogether, and with this ointment anoint the sore place twice a day. Otherwise for this grief, take Lead and grate it small, and lay it upon the sore: or else take muscles dryed and beat to powder, and lay it on the sores.

For the falling of the fundament.

If a mans fundament fall down through some cold taken, or other cause, let it be forthwith put up again: then take the powder of *Town crosse* dried, and strew it gently upon the fundament, and anoint the reins of the back with hony, and then about it strew the powder of Cummin and Calasine mixt together, and ease will come thereby.

Additions to the diseases of the privy parts.

Take a great handfull of Orpins, and bruise them between your hands, till it be like a salve, and then lay them upon a cloth, and bind them fast to the Fundament.

For the hemorhoids.

For the green sickness.

To help the green sickness, take a pottle of white wine, and a handfull of Rosemary, a handfull of Wormwood, an ounce of Carduus Benedictus seed, and a dram of Cloves; all these must be put into the white wine in a jug, and covered very close, and let it steep a day and a night before the party drink of it, then let her drink of it every morning, and two hours before supper: and so take it for a fortnight, and let her stir as much as she can, the more the better, and as early as she can. Otherwise for this sickness take Hyssop, Fennel, Penyroyal, of these three, one good handful, take two ounces of Currants, seeth these in a pint of fair water, to a half, then strain the herbs from the liquor, and put thereto two ounces of fine sugar, and two spoonfuls of white wine vinegar, let the party drink every morning four spoonfuls thereof, and walk upon it.

To encrease a womans milk.

To increase a womans milk, you shall boyl in strong posset ale, good store of Coleworts, and cause her to drink every meal of the same: also, if she use to eat boiled Coleworts with her meat, it will wonderfully increase her milk.

To dry up a womans milk, take red sage, and having stampt

it

it, and ſtrained the juyce from the ſame, add thereunto as much wine vinegar, and ſtir them well together, then warm it on a flat diſh, over a few coals, ſteep therein a ſheet of brown paper, then making a hole in the midſt thereof for the nipple of the breſt to go through, cover all the breaſt over with the paper, and remove it as occaſion ſhall ſerve, but be very careful it be laid very hot to. Some are of opinion, that for a woman to milk her breaſts upon the earth, will cauſe her to dry: but I refer it to triall. To dry up milk.

To help womens ſore breaſts, when they are ſwelled, or elſe inflamed, take Violet leaves, and cut them ſmall, and ſeeth them in milk or running water with wheat bran, or wheat bread crummes, then lay it to the ſore, as hot as the party can endure it. A pultis for ſore breaſts in women.

If a woman have a ſtrong and hard labour, take four ſpoonfulls of another womans milk, and give it the woman to drink in her labour, and ſhe ſhall be delivered preſently. For eaſe in child bearing.

If a woman by miſchance have her child dead within her, ſhe ſhall take *Dittander*, *Felwort*, *Penyroyall*, and ſtamp them, and take of each a ſpoonful of the juyce, and mix it with old wine, and give her to drink, and ſhe ſhall ſoon be delivered without danger. Child dead in the womb.

To make a woman to conceive, let her either drink *Mugwort* ſteeped in wine; or elſe the powder thereof mixed with wine, as ſhall beſt pleaſe her taſte. Aptneſs to conceive.

Take the powder of *Corall* finely ground, and eat it in a rear egg, and it will ſtay the flux. Additions to womens infirmities.

Againſt womens terms, make a peſſary of the juice of *Mugwort*, or the water that it is ſodden in, and apply it, but if it be for the flux of the flowres, take the juice of *Plantane*, and drink it in red wine. To ceaſe womens flowers.

Take a Fomentation made of the water wherein the leaves and flowers of *Tutſon* is ſodden, to drink up the ſuperfluities of the matrix, it cleanſeth the entrance; but this herb would be gathered in harveſt; if the woman have pain in the matrix, ſet on the fire, water that *Amomum* hath been ſodden in, and of the decoction make a peſſary, and it will give eaſe. Againſt the flowers. For the matrix.

Take

A generall purge for a woman in child-bed.

Take two or three eggs, and they must be neither roſt nor raw, but between both, and then take butter that Salt never came in, and put into the eggs, and ſup them off; and eat a piece of brown bread to them, and drink a draught of ſmall Ale.

To deliver the dead birth

Take the root of *Ariſtolochia rotunda*, and boyl it in wine and oil, make a fomentation thereof, and it helps.

To increaſe milk.

Take the buds and tender crops of Briony, and boyl them in broth or pottage, and let the woman eat thereof, it is ſoveraign.

For a woman that is new brought in bed, and ſwooneth much.

Take Mugwort, Motherwort, and Mints, the quantity of a handfull in all, ſeeth them together in a pint of Malmſey, and give her to drink thereof two or three ſpoonfuls at a time, and it will appeaſe her ſwooning.

To provoke ſleep.

Take Henbane ſtamped and mixt with vinegar, and apply it playſter-wiſe over all the forehead, and it will cauſe ſleep.

For ſore breſts.

Take Sage, Smallage, Mallowes, and Plantane, of each an handfull, beat them all well in a mortar, then put unto them oatmeal and milk, and ſpread it on a fine linnen cloth, an inch thick, and lay it to the breſt or breſts: or otherwiſe, take white bread leaven, and ſtrain it with cream, and put thereto two or three yelks of eggs, ſallet oyl, or oyl of Roſes, and put it upon a ſoft fire till it be warm, and ſo apply it to the breſt.

For morphew of both kinds.

For Morphew, whether it be white or black, take of the Litharge of gold, a dram, of unwrought brimſtone two drams, beat them into fine powder, then take of the oyl of Roſes and Swines greaſe, of each a like quantity, and grind them altogether with half a dram of Camphire, and a little vinegar, and anoint the ſame therewith morning and evening.

To breed hair.

To breed hair, take Southernwood, and burn it to aſhes, and mix it with common oyl, then anoint the bald place therewith morning and evening, and it will breed hair exceedingly.

For the Gout.

For the Gout, take *Ariſtolochia rotunda*, *Althea*, Betony, and the roots of wild Nep, and the roots of the wild Dock cut in pieces after the upper rind is taken away, of each alike quantity, boyl them all in running water till they be ſoft and thick: then ſtamp them in a mortar, as ſmall as may be, and put

put thereto a little quantity of chimney ſoot, and a pint of new milk of a Cow, which is all of one intire colour, and as much of the urine of a man that is faſting, and having ſtirred them all well together, boil them once again on the fire, then as hot as the party can ſuffer it, apply it to the grieved place, and it will give him eaſe.

For the Sciatica, take of muſtard ſeed a good handful, and as much of white hony, and as much weight of figs, and crums of white bread half ſo much, then with ſtrong vinegar beat it in a mortar till it come unto a ſalve; then apply it unto the grieved place, and it will give the grieved party eaſe, ſo will alſo a plaiſter of Oxicrotium, if it be continually warm upon the ſame. For the Sciatica.

To help all manner of ſwelling or aches in what part of the body ſoever it be, or ſtinging of any venomous beaſt, as Adder, Snake, or ſuch like; take Hore-hound, Smallage, Porrets, ſmall Mallows, and wild Tanſey, of each a like quantity, and bruiſe them or cut them ſmall: then ſeeth them altogether in a pan, with milk, oatmeal, and as much ſheeps ſuet, or dears ſuet, as a Hens egg, and let it boile till it be a thick plaiſter, then lay it upon a blew woollen cloth, and lay it to the griefe, as hot as one can ſuffer it. For any pain or ſwelling, or ſtinging of venomous Beaſts.

For any ſwelling in the legs or feet, take a good handful of water creſſes, and ſhred them ſmall, and put them in an earthen pot: and put thereto thick Wine lees, and wheat bran, and Sheeps ſuet, of each of them a like quantity, and let them boyl together untill they be thick; then take a linnen cloth, and bind it about the ſore and ſwelling, as hot as the party grieved can indure it, and let it remain on a whole night and a day without any removing, and when you take it away, lay to it a freſh plaiſter, hot as before, and it will take away both the pain and the ſwelling. Other Chirurgions for this grief, take hony and beer, and beat them together, and therewith bathe the ſwelling morning and evening. For ſwellings in the legs or feet.

To waſh any ſore or Ulcer, take running water, and Bole-armenick and Camphire, and boile them together, and dip in a cloth, and lay it to the ſore, as hot as may be endured; alſo Plantane water is good to kill the heat of any ſore: or if you take Woodbine leaves, and bruiſe them ſmall, it will heal a ſore; or if you waſh A water to waſh a ſore with.

washa sore with verjuyce, that hath been burnt or scalded, it is a present remedy.

A pultis for a sore.

There be divers others, which for this griefe take the green of Goose dung, and boyl it in fresh butter, then strain it very clean and use it. And Sallet oyl, and Snow water beaten together, will cure any scald or burning.

For any old sore.

To cure any old sore how grievous soever it be, take of new milk three quarts, and a good handful of Plantane, and let it boyl till a pint be consumed; then add three ounces of Allom made in powder, and an ounce and a half of white Sugar candy powdered. Also then let it boyl a little till it have a curd, then strain it; with this warm, wash the Ulcer, and all the members about it: then dry it, and lay upon the Ulcer *Unguentum Basilicon*, spread on lint, and your *diminium* playster over it, for this strengthneth and killeth the itch; but if you find this is not sharp enough, then take of milk a quart, Allom in powder two ounces, vinegar a spoonful; when the milk doth seeth, put in the Allom and Vinegar, then take off the curd, and use the rest as was before said, and it will cure it.

For any scabs or itch.

For scabs or itch, take *Unguentum Populion*, and therewith anoint the party, and it will help; but if it be more strong and rank, take an ounce of Nerve oyl, and three pennyworth of quicksilver, and beat and work them together, untill you see that assuredly the quick silver is killed, then let the party anoint therewith the palms of his hands, the boughs at his elbowes, his arm-pits, and hams, and it will cure all his body.

For the leprosie.

To cure the leprosie take the juyce of Colworts, and mix it with Allom and strong Ale, and anoint the Leper therewith morning and evening, and it will cleanse him wonderfully, especially if he be purged first, and have some part of his corrupt blood taken away.

To take away pimples.

To take away either pimples from the face, or any other part of the body, take virgin wax, and *Sperma cæti*, of each alike quantity, and boyl them together, and dip in a fine linnen cloth, and as it cools, dip it well of both sides, then lay upon it another fair cloth upon a table, and then fold up a cloth in your hands, and all to slight it with the cloth, then take as much as will cover the grieved place.

If

If any man have his privy parts burnt, take the aſhes of a fine linnen cloth in good quantity, and put it into the former oyle of eggs, and anoint the ſore member therewith, and it will cure it. Privy parts burnt.

For any burning, take ſix new laid eggs and roaſt them very hard, and take out the yelks thereof and put them into an earthen pot, and ſet it over the fire on hot embers, and then whilſt the eggs look black, ſtir them with a ſlice untill they come to an oyl, which oyl take, clarifie, and put it into a glaſs by it ſelf, and therewith anoint the burning and it will cure it. For any burning.

For any ſcalding with hot water, oyl, or otherwiſe, take good cream, and ſet it on the fire, and put into it the green which growes on a ſtone wall; take alſo Yarrow, the green of Elder bark and fire graſs, and chop them ſmall, then put them into the cream, and ſtir it well till it come to an oyl ſalve, then ſtrain it and anoint the ſore with it. For any ſcalding.

To dry up any ſore, take Smallage, Groundſil, wild Mallowes, and Violet leaves; chop them ſmall, and boyl them in milk with bruiſed Oatmeal and Sheeps ſuet, and ſo apply it to the ſore. A pultis to dry a ſore.

To eat away dead fleſh, take Stubblewort, and fold it up in a red dock leaf, or red wort leaf, and ſo roſt it in the hot embers, and ſo lay it to the ſore, and it will fret away all the dead fleſh; or otherwiſe, if you ſtrew upon the ſore a little Precipitate, it will eat away dead fleſh. To eat away dead fleſh.

To make a water to heal all manner of wounds, you ſhall take Iuph worts flowers, leaves and roots, and in *March* or *Aprill*, when the flowers are at the beſt, diſtill it; then with that water, bathe the wound, and lay a linnen cloth wet therewith in the wound, and it will heal it. A water to heal wounds.

To heal any wound or cut in any fleſh or part of the body, Firſt, if it be fit to be ſtitch'd, ſtitch it up, and then take *Unguentum aurum*, and lay it upon a pleagant of lint as big as the wound, and then over it a *diminium* plaiſter made of Sallet oyl and red lead, and ſo dreſs it at leaſt once in four and twenty hours: but if it be a hollow wound, as ſome thruſt in the body, orother members, then you ſhall take *Balſamum cephalicum* and warming it on a chafingdiſh of coals, dip the tent therein, To heal any wound.

and so put it into the wound, then lay your plaister of Diminium over it, and do thus at least once a day untill it be whole.

For sinews cut or shrunk.

If a mans sinews be cut or shrunk, he shall go to the root of the wild Nep, which is like Woodbine, and make a hole in the midst of the root, then cover it well again that no air go out nor in, nor other moysture; thus let it abide a day and a night, then go and open it, and you shall find therein a certain liquor, then take out the liquor and put it into a clean glass, and do thus every day whilst you find any moisture in the hole; and this must onely be done in the months of *April* and *May*, then anoint the sore therewith against the fire, then wet a linnen cloth in the same liquor, and lap it about the sore, and the vertue will soon be perceived.

To break any impostume.

To break any Impostume, and to ripen it, only take the green Melilot plaister, and lay it thereunto; and it is sufficient.

Of general infirmities of Chyrurgery, and first of burnings and scalding.

For burning or scalding, with either Liquor or Gunpowder.

Take Plantane water, or Sallet oyl, and running water beaten together, and therewith anoint the sore with a feather, till the fire be taken out, then take the whites of eggs, and beat them to oyl; which done, take a hares skin and clip the hair into the oyl, and make it as thick as you may spread it upon a fine linnen cloth, and so lay it upon the sore, and remove it not, untill it be whole, and if any rise up of it self, clip it away with your shears, and if it be not perfectly whole, then take a little of the oyntment, and lay it unto the same place again: otherwise take half a bushel of Glovers shreads of all sorts, and so much of running water, as shall be thought convenient to seeth them, and put thereto a quarter of a pound of Barrows grease, and then take half a bushel of the down of Cats tails; and boyl them altogether, continually stirring them, untill they be sodden, that they may be strained into an earthen pot or glasse, and with it anoint the sore.

For burnings or scaldings on the face.

Or else take Caprifolium, Mouse-ear, ground Ivy, and Hens dung, the reddest or the yellowest, and fry them with May butter altogether, untill it be brown, then strain it through a clean cloth, and anoint the sore therewith.

Take the middle rind of the Elm tree, and lay it two or three hours

hours in fair running water, till it wax ropy like glew, and the anoint the ſore therewith: Or otherwiſe, take ſheeps tallow, and ſheeps dung, and mix them together till they come to a ſalve, and then apply it to the ſore.

An ointment for burning.

Take Plantane leaves, Daiſie leaves, the green bark of Elders, and green Germanders, ſtamp them altogether with freſh butter, or with oyl, and ſtrain it through a linnen cloth, and with a feather anoint the ſore till it be whole.

Take of the oyl Olive a pint, Turpentine a pound unwrought, Wax half a pound, Roſen a quarter of a pound, Sheeps ſuet two pound; then take of Orpents, Smallage, Ragwort, Plantane, and Sicklewort, of each a good handful, chop all theſe herbs very ſmall, and boyl them in a pan altogether upon a ſoaking fire, and ſtir them exceeding much, untill they be well incorporated together, then take it from the fire, and ſtrain all through a ſtrong canvaſs cloth into clean pots, or glaſſes, and uſe it as your occaſion ſhall ſerve, either to anoint, tent, or plaiſter.

Ulcers and ſores.

A ſalve for any old ſore.

Or otherwiſe, take Popler buds, and Elder buds, ſtamp and ſtrain them, then put thereto a little Venice Turpentine, Wax, and Roſin, and ſo boyl them together, and therewith dreſs the ſore. Or elſe take two handfuls of Plantane leaves, bray them ſmall, and ſtrain out the juyce, then put to it as much womans milk, a ſpoonful of hony, a yelk of an Egg, and as much wheat flower as you think will bring it to a ſalve: then make a plaiſter thereof, and lay it unto the ſore, renewing it once in four and twenty hours.

To take away dead fleſh.

Take an ounce of *Unguentum Apoſtolorum*, and an ounce of *Unguentum Ægyptiacum*, and put them together in a pot, being firſt well wrought together in a bladder; and if the fleſh be weak, put into it a little fine white Sugar, and therewith dreſs the ſore; or otherwiſe, take only Precipitate in fine powder, and ſtrew it on the ſore.

A water for a ſore.

Take a gallon of Smiths ſleak water, two handfuls of Sage, a pint of Hony, a quart of Ale; two ounces of Allom, & a little white Copperas, ſeeth them altogether till half be conſumed, then ſtrain it, and put it into a clean veſſel, and therewith waſh the

ſore

sore. Or otherwise, take clean running water, and put therein Roch Allom, and Madder, and let them boyl till the Allom and the Madder be consumed, then take the clearer of the water, and therewithall wash the sore.

Or else take Sage, Fennel, Cinquefoil, of each a good handful, boyl them in a gallon of running water till they be tender, then strain the liquor from the herbs and put it to a quarter of a pound of Roch Allom, and let it seeth again a little, till the Allom be melted, then take it from the fire, and use it thus: dip lint in it warm, and lay it to the sore; and if it be hollow, apply more lint, then take a little bolster of linnen cloth, and wet it well in the water, then wring out the water, and so bind on the bolster close.

A black plaister to heal old sores, and kill inflammations.

Take a pint of sallet oyl, and put into it six ounces of red lead, and a little ceruse of white lead, then set it over a gentle fire, & let it boyl a long season, stirring it well till it be stiff, which you shall try in this order; let it drop from your stick or slice, upon the bottom of a saucer, and so stand untill it be cold, and then if it be well boiled, it will be stiff and very black, then take it off and let it stand a little, and after strain it through a cloth into a bason, but first anoint the bason with sallet oyl, and also your fingers, and so make it up into rouls plaisterwise, and spread it, and apply it as occasion shall serve.

An oyntment to ripen sores.

Take Mallows and Beets, and seeth them in water, then dry away the water from them, and beat the herbes well with old Boares grease, and so apply it unto the apostume, hot.

For the stinging by any venomous thing.

Take a handful of Rue, and stamp it with rusty bacon till it come to a perfect salve, and therewith dress the sore till it be whole.

For a venom.

If the party be outwardly venomed, take Sage, and bruise it well, and apply it unto the sore, renewing it at least twice a day; but if he be inwardly, then let the party drink the juyce of Sage, either in Wine or Ale morning and evening.

For a ringworm.

Take Celandine early in the morning, and bruise it well, and then apply it to the sore, and renew it twice or thrice a day.

Take of Camphire one dram, of Quicksilver four pennyworth,

killed

killed well with Vinegar, then mix it with two penny worth of Oyl *de bay*, and therewith anoint the body. Or otherwiſe, take red Onions, and ſeeth them in running water a good while; then bruiſe the Onions ſmall, and with the water they were ſodden in, ſtrain them in, and then waſh the infected place with the ſame. For the Itch.

Take a great quantity of the herb Bennet, and as much of red Nettles, pound them well, and ſtrain them, and with the juice waſh the patient naked before the fire, and ſo let it drink in, and waſh him again, and do ſo divers days till he be whole. For the dried ſcab.

Take a penniworth of white Copperas, and as much green Copperas, a quarter of an ounce of white Mercury, a half penniworth of Allom, and burn it, and ſet all over the fire, with a pint of fair water, and a quarter of a pint of wine Vinegar, boyl all theſe together till they come to half a pint, and then anoint the ſore therewith. To kill the Itch.

Take Barrowes greaſe a pretty quantity, and take an apple and pare it, and take the coar clean out, then chop your apple and your Barrowes greaſe together, and ſet it over the fire that it may melt, but not boyl; then take it from the fire, and put thereto a pretty quantity of roſe water, and ſtir all together till it be cold, and keep it in a clean veſſell, and then anoint the face therewith. To take away the ſcars of the ſmall pox.

Take Quick ſilver, and kill it with faſting ſpittle; then take Verdigreaſe, Arabick, Turpentine, Oyl Olive, and Populion, and mix them together to one intire oyntment, and anoint the ſores therewith, and keep the party exceeding warm. Or otherwiſe, take of Allom burned, of Roſin, Frankincenſe, Populion, Oyl of Roſes, Oyl *de bay*, Oyl Olive, green Copperas, Verdigreeſe, White Lead, Mercury ſublimate, of each a pretty quantity, but of Allom moſt; then beat to powder the ſimples that are hard, and melt your oyls, and caſt in your powder, and ſtir all well together; then ſtrain them through a cloth, and apply it warm to the ſores; or elſe, take of Capons greaſe that hath toucht no water, the juyce of Rue, and the fine powder of Pepper, and mix them together to an oint-ment, and apply it round about the ſores, but let it not come into the ſores; and it will dry them up. For the french or ſpaniſh Pox.

Take

To put out the French or Spanish pox.

Take Treacle half a penny worth, of long Pepper as much, and of Grains as much, a little Ginger, and a little quantity of Licoris, warm them with strong Ale, and let the party drink it off, and lie down in his bed, and take a good sweat; and then when the sores arise, use some of the ointment before rehearsed.

To make the scabs of the French pox to fall away.

Take the juyce of red Fennel, and the juice of Seagreen, and Stone-honey, and mix them very well together till it be thick, and with it anoint the party, but before you do anoint him, you shall make this water. Take Sage, and seeth it in very fair water, from a gallon to a pottle, and put therein a quantity of honey, and some allom, and let them boyl a little together; when you have strained the herbs from the water; then put in your honey and your allom, and therewith wash the pox first, and let it dry in well, and then lay on the aforesaid ointment.

Addition to green wounds.

A defensive for a green wound.

Take the oyle of the white of an egg, wheat-flower, a little hony, and Venice turpentine, take and stir all these together, and use it about the wound, but not within; and if the wound do bleed, then add to this salve, a little quantity of Bole-armenick.

A salve for a green wound.

Take *Opoponax* and *Galbanum*, of each one ounce, *Amoniacum*, and Bedlind, of each two ounces, of Litharge of gold one pound and an half, new wax half a pound, *Lapis Calaminaris* one ounce, Turpentine four ounces, Myrrhe two ounces, oyl *de bay* 1 ounce Thus one ounce, *Aristolochia* roots two ounces, oyle of Roses two ounces, sallet oyl two pound. All the hard Simples must be beaten to fine powder, and searsed; take also three pints of right wine vinegar, and put the four gums into the vinegar, a whole day before, till the gums be dissolved, then set it over the fire, and let it boyl very softly, untill your vinegar be as good as boyled away; then take an earthen pot with a wide mouth, and put your oyl in, and your wax, but your wax must be scraped before you put it in; then by a little at once put in your Litharge, and stir it exceedingly, then put in all your gums, and all the rest, but let your Turpentine be last, and so let it boyl till you see it grow to be thick; then pour it into a bason of water, and work it with oyl of Roses for sticking unto your hands, and make up in rouls plaister-wise, and here is to be noted, that your oyl of Roses must not

not be boyled with the reſt, but after it is taken from the fire, a little before the Turpentine.

Take three good handfuls of Sage, and as much of Honiſuckle leaves, and the flowers clean picked; then take one pound of Roch Allom, and a quarter of a pound of right Engliſh honey clarified, half a penniworth of grains, and two gallons of running water; then put all the ſaid things into the water, and let them ſeethe till half be conſumed; then take it from the fire till it be almoſt cold, and ſtrain it through a clean cloth, and put it up in a glaſs; and then either on teint or pleagant, uſe it as you have occaſion. A Water to heal any green wound, cut, or ſore.

Take a quart of Rie flower, and temper it with running water, and make dough thereof, then according to the bigneſſe of the wound, lay it within the defenſitive plaiſter before rehearſed, over it, and every dreſſing make it leſſe and leſſe till the wound be cloſed. To ſtaunch blood, and draw ſinews together.

Take a quart of Neats-foot oyl, a quart of Oxe gals, a quart of *Aqua-vitæ*, a quart of Roſe water, a handful of Roſemary ſtript, and boyl all theſe together till half be conſumed, then preſs and ſtrain it, and uſe it according as you find occaſion. A made Oyl for ſhrinking Sinews.

Take Honey, Pitch, and Butter, and ſeeth them together, and anoint the hurt againſt the fire, and tent the ſore with the ſame. For a wound in the Guts.

Take groundſil and ſtamp it, and ſeethe it with ſweet milk till it be thick, then temper it with black Sope, and lay it to the ſore. For pricking with a thorn.

Take Roſin a quarter of a pound, of wax three ounces, of oyl of Roſes one ounce and a half, ſeeth them all together in a pinte of white Wine till it come to skimming; then take it from the fire, and put thereto two ounces of Venice Turpentine, and apply it to the wound or ſore. To gather fleſh in wounds.

Take Muſtard made with ſtrong Vinegar, the crums of brown bread, with a quantity of honey, and ſix Figs mixt, temper all together well, and lay it upon a cloth plaiſter-wiſe; put a thin cloth between the plaiſter and the fleſh, and lay it to the place grieved, as oft as need requires. Additions for ache or ſwellings.

Take a pound of fine Roſin, of oyl *de bay* two ounces, of *Populion* as much, of Frankincenſe half a pound, of oyl of Spike two ounces, of oyl of Camomile two ounces, of oyl of Roſes two ounces, A yellow Starcloth for any pain or ſwelling.

ces, of Wax half a pound, of Turpentine a quarter of a pound, melt them and ſtir them well together, and then dip Linnen cloths therein, and apply the Sear-cloth as you ſhall have occaſion. And Note, The more oyl you uſe, the more ſupple the Sear-cloth is, and the leſs oyl, the ſtiffer it will be.

For bruiſes ſwelled.

Take a little black Sope, Salt and Honey, and beat them well together, and ſpread it upon a brown paper, and apply it to the bruiſe.

For ſwelled Legs.

Take Mallowes and ſeeth them in the dregs of good Ale or Milk, and make a plaiſter thereof, and apply it to the place ſwelled.

For any ache.

Take in the moneth of *May* Henbane, and bruiſe it well, and put it into an Earthen pot, and put thereto a pint of Sallet Oyl, and ſet it in the Sun till it be all one ſubſtance, then anoint the ache therewith.

A Plaiſter for any pain in the Joynts.

Take half a pound of unwrought Wax, as much Roſin, one ounce of *Galbanum*, a quarter of a pound of Litharge of gold, three quarters of white lead, beaten to powder and ſearſt, then take a pint of Neats-foot oyl, and ſet it on the fire in a ſmall Veſſel which may contain the reſt, and when it is all moulten, then put in the powders, and ſtir it faſt with a ſlice, and try it upon the bottom of a ſaucer, when it beginneth to be ſomewhat hard; then take it from the fire, and anoint a fair board with Neats-foot oyl, and as you may handle it for heat, work it up in rouls, and it will keep five or ſix years, being wrapped up cloſe in paper, and when you will uſe it, ſpread of it thin upon new Lockram or Leather, ſomewhat bigger then the grief, and ſo if the grief remove, follow it, renewing it morning and evening, and let it be ſomewhat warm when it is laid on, and beware of taking cold, and drinking hot Wines.

For bones out of joynt, or ſinews ſprung or ſprained.

Take four or five yelks of eggs hard ſodden or roaſted, and take the branches of great Morrell, and the Berries in Summer, and in the Winter the roots, and bray all well together in a Mortar with ſheeps milk, and then fry it untill it be very thick, and ſo make a plaiſter thereof, and lay it about the ſore, and it will take away both pain and ſwelling.

Take

Take a gallon of ſtanding Lye, put to it of Plantane and Knot-graſs, of each two handfuls, of Wormwood and Comfrey, of each a handful, and boyl all theſe together in the lye a good while, and when it is luke-warm, bathe the broken member therewith, and take the buds of the Elder gathered in *March*, and ſtrip it downward, and a little boyl them in water, then eat them in Oyl, and a very little Wine Vinegar, a good quantity at a time in the morning ever before meat, or an hour before the Patient go to dinner, and it much avails to the knitting of bones. A bath for broken Joynts.

Take Roſemary, Fetherfew, Orgain, Pellitory of the wall, Fennel, Mallowes, Violet leaves and Nettles, boyl all theſe together, and when it is well ſodden, put to it two or three gallons of milk, then let the party ſtand or ſit in it an hour or two, the bath reaching up to the ſtomach, and when they come out, they muſt go to bed and ſweat, and beware taking of cold. A general bath for clearing the Skin, and comforting the body.

Make a Plaiſter of Wheat flower, and the whites of eggs, and ſpread it on a double linnen cloth, and lay the plaiſter on an even board, and lay the broken limb thereon, and ſet it even according to Nature, and lay the plaiſter about it and ſplint it, and give him to drink Knitwort, the juyce thereof, twice and no more, for the third time it will unknit, but give him to drink nine dayes, each day the juyce of Comfrey, Daiſies, and Oſmund, in ſtale Ale, and it ſhall knit, and let the foreſaid plaiſter lye on ten dayes at the leaſt: and when you take it away do thus; Take Horehound, red Fennel, Hounds tongue, Walwort, and Pellitory, and ſeeth them; then unroul the member, and take away the ſplints; and then bath the linnen and the plaiſter about the member in this bath, till it have ſoakt ſo long, that it come gently away of it ſelf, then take the aforeſaid plaiſter, and lay thereto five or ſix dayes very hot, and let each plaiſter lye a day and a night, and alwayes ſplint it well, and after cheriſh it with the Oyntments before reherſed for broken bones, and keep the party from unwholeſome meats and drinks till he be whole; and if the hurt be on his arm, let him bear a ball of green herbs in his hand to prevent the ſhrinking of the hand and ſinews. A ſoveraign help for broken bones.

For any Feaver.

Take Sage, Ragwort, Yarrow, unset Leeks, of each a like quantity, stamp them with Bay-salt, and apply them to the wrists of the hands.

To expel heat in a Feaver.

Blanch Almonds in the cold water, and make milk of them, (but it must not seethe) then put to it Sugar, and in the extremity of heat, see that you drink thereof.

The Royal Medicine for Feavers.

Take three spoonfuls of Ale, and a little Saffron, and bruise and strain it thereto, then add a quarter of a spoonful of fine Treacle, and mix altogether, and drink it when the fit comes.

Another.

Take two roots of Crowfoot that growes in a marsh ground, which have no little roots about them, to the number of twenty or more, and a little of the earth that is about them, and do not wash them, and add a little quantity of Salt, and mix it well together, and lay it on linnen cloths, and bind it about your thumbs, betwixt the first and the neather joynt, and let it lie nine dayes unremoved, and it will expell the Feaver.

An approved Medicine for the greatest Lask or Fluxe.

Take a right Pomwater, the greatest you can get, or else two little ones, roast them very tender to pap, then take away the skin and the core, and use only the pap, and the like quantity of Chalk finely scraped, mix them both together upon a trencher before the fire, and work them well to a Plaister; then spread it upon a linnen cloth warmed very hot as may be suffered, and so bind it unto the Navil for twenty four hours, use this Medicine twice or thrice, or more, untill the Lask be stayed.

Of Oyl of Swallowes.

To make the Oyl of Swallowes, take Lavender-cotten, Spike-Knot-grass, Ribwort, Balm, Valerian, Rosemary tops, Woodbine tops, Vine strings, French Mallows: the tops of Alecost, Strawberry strings, Tutsan, Plantane, Walnut Tree leaves, the tops of young Beets, Isop, Violet leaves, Sage of vertue, fine Roman Wormwood, of each of them a handful, Camomile, and red

red Roses, of each two handfuls, twenty quick Swallows, and beat them altogether in a Mortar, and put to them a quart of Neats-foot oyl, or May butter, and grind them all well together with two ounces of Cloves well beaten; then put them all together in an earthen pot, and stop it very close, that no ayr come into it, and set it nine dayes in a Cellar, or cold place, then open your pot, and put into it half a pound of white or yellow Wax, cut very small, and a pint of Oyl or Butter; then set your pot close stopped into a pan of water, and let it boyl six or eight hours, and then strain it: This Oyl is exceeding soveraign for any broken bones, bones out of joynt, or any pain or grief either in the bones or sinews.

To make Oyl of Camomile, take a quart of Sallet Oyl, and put it into a glasse, then take a handful of Camomile, and bruise it, and put into the Oyl, and let them stand in the same, twelve dayes; only you must shift it every three dayes, that is, to strain it from the old Camomile, and put in as much of new, and that Oyl is very soveraign for any grief, proceeding from old causes. To make Oyl of Camomile.

To make Oyl of Lavender, take a pint of Sallet Oyl, and put it into a glass, then put to it a handful of Lavender, and let it stand in the same twelve dayes, and use it in all respects, as you did your Oyl of Camomile. To make Oyl of Lavender.

To make an Oyl which shall make the skin of the hands very smooth, take Almonds, and beat them to oyl, then take whole Cloves, and put them both together in a glass, and set it in the Sun five or six dayes, then strain it, and with the same anoint your hands every night when you go to bed, or otherwise as you have convenient leisure. To make smooth hands.

To make that soveraign Water, which was first invented by Dr. *Stephens*, in the same form as he delivered the Receipt to the Archbishop of *Canterbury*, a little before the death of the said Doctor: Take a gallon of good Gascoyn Wine, then take Ginger, Galangale, Cinamon, Nutmegs, Grains, Cloves bruised, Fennel-seeds, Carraway-seeds, Origanum, of every of them a like quantity; that is to say, a dram; then take Sage, wild Marjerom, Peny-royal, Mint, red Roses, Thyme, Pellitory, Rosemary, wild Thyme, Camomile, Lavender, of each of them a hand- To make Dr. *Stevens* water.

handful; then bray the Spices small, and bruise the herbs, and put all into the Wine, and let it stand so twelve hours, onely stirre it divers times; then distill it by a Lymbeck, and keep the first water by it self, for that is the best; then keep the second water, for that is good, and for the last, neglect it not, for it is very wholesome, though the worst of the three.

Now for the vertue of this Water, it is this; It comforteth the spirits and vital parts, and helpeth all inward diseases that come of cold; it is good against the shaking of the Palsie, and cureth the contraction of the Sinews, and helpeth the Conception of Women that be barren, it killeth Worms in the Body, it cureth the cold Cough, it helpeth the Tooth-ach, it comforteth the stomach, and cureth the old Dropsie, it helpeth the stone in the Bladder, and in the Reins, it helpeth a stinking Breath: and whosoever useth this Water moderately, and not too often, it preserveth him in good liking, and will make him seem young in old age. With this Water Doctor *Stephens* preserved his own life, untill such extream age, that he could neither go nor ride; and he continued his life, being bed-rid five years, when other Physitians did judge he could not live one year; when he did confess a little before his death, saying, *That if he were sick at any time, he never used any thing but this Water onely.* And also the Archbishop of *Canterbury* used it, and found such goodnesse in it, that he lived till he was not able to drink out of a Cup, but sucked his drink through a hollow Pipe of Silver.

This Water will be much the better if it be set in the Sun.

A restorative of Rosa-solis.

To make a Cordial *Rosa-solis*, take *Rosa-solis*, and in any wise touch not the leaves thereof in the gathering, nor wash it; take thereof four good handfuls, then take two good pints of *Aqua-vitæ*, and put them both in a glasse or pewter pot of three or four pints, and then stop the same hard and just, and so let it stand three days and three nights, and the third day, strain it through a clean cloth into another glasse, or pewter pot, and put thereto halfe a pound of Sugar beaten small, four ounces of fine Lycoras beaten into powder, halfe a pound of sound Dates, the stones being taken out, and cut them and make them clean, and then mince them small, and mixe all these together, and stop the

the glasse or pot close and just, and after distil it through a Lymbeck, then drink of it at night to bedward, half a spoonfull with Ale or Beer, but Ale is the better, as much in the morning fasting, for there is not the weakest body in the world that wanteth nature or strength, or that is in a consumption, but it will restore him again, and cause him to be strong and lusty, and to have a marvellous hungry stomach, provided alwayes that this Rosa-solis be gathered (if possibly) at the full of the Moon, when the Sun shineth before noon, and let the roots of them be cut away.

Additions to the Oyls.

To make Oyl of Roses or Violets.

Take the flowers of Roses or Violets, and break them small, and put them into Sallet Oyle, and let them stand in the same ten or twelve dayes, and then presse it. Or otherwise take a quart of Oyle Olive, and put thereto six spoonfuls of clean water, and stirre it well with a slice, till it wax as white as milk; then take two pound of red Rose leaves, and cut the white of the ends of the leaves away, and put the Roses into the Oyle, and then put it into a double glasse, and set it in the Sun all the Summer time, and it is soveraign for any scalding or burning with Water or Oyl.

Or else take red Roses new plucked, a pound or two, and cut the white ends of the leaves away, then take May-butter, and melt it over the fire with two pound of Oyle Olive, and when it is clarified, put in your Roses, and put it all in a vessel of glasse, or of earth, and stop it well about, that no air enter in or out, and set it in another vessel with water, and let it boyl half a day or more, and then take it forth and strain or presse it through a cloth, and put it into glasse bottles: this is good for all manner of unkind heats.

To make Oyl of Nutmegs.

Take two or three pound of Nutmegs, and cut them small, and bruise them well, then put them into a pan, and beat them, and stir them about, which done, put them into a canvas or strong linnen bag and close them in a presse, and presse them, and get out all the liquor of them, which will be like *Manna*; then scrape it from the canvasse bag, as much as you can with a knife; then put it into some vessel or glasse, and stop it well, but set it not in the Sun, for it will wax clean of it self, within 10 or 15 dayes, and

and it is worth thrice so much as the Nutmegs themselves, and the Oyl hath very great vertue in comforting the Stomach and inward parts, and aswaging the pain of the Mother, and Sciatica.

To make perfect Oyl of Spike.

Take the flowers of Spike, and wash them only in oyl Olive, and then stamp them well, then put them in a canvas bag, and press them in a press as hard as you can, and take that which commeth out, carefully, and put it into a strong vessel of glasse, and set it not in the Sun, for it will clear of it selfe, and wax fair and bright, and will clear of it self, and will have a very sharp odour of the Spike; And thus you may make Oyl of other herbs of like nature, as Lavender, Camomile, and such like.

To make Oyl of Mastich.

Take an ounce of Mastich, and an ounce of Olibanum pounded as small as is possible, and boyl them in oyl Olive (a quart to a third part,) then press it, and put it into a glass, and after ten or twelve dayes it will be perfect: it is exceeding good for any cold grief.

Thus having in a summary manner passed over all the most Physical and Chyrurgical Notes, which burthen the mind of our *English House-wife*, being as much as is needful, for the preservation of the health of her Family; and having in this Chapter, shewed all the inward vertues wherewith she should be adorned: I will now return unto her more outward and active knowledges, wherein albeit the mind be as much occupied as before, yet is the body a great deal more in use: neither can the work be well effected by rule or direction.

The

The *English House-wifes* Skill in Cookery.

CHAP. I.

Of the outward and active Knowledge of the House-wife, and of her Skill in Cookery, as Sallets of all sorts, with Flesh, Fish, Sauces, Pastery, Banquetting-stuff, and ordering of great Feasts.

TO speak then of the outward and active Knowledges which belong unto our English House-wife, I hold the first and most principal to be, a perfect skill and knowledge in Cookery, together with all the secrets belonging to the same, because it is a duty well belonging to women; and she that is utterly ignorant therein, may not by Laws of strict Justice challenge the freedome of Marriage, because indeed she can then but perform half her vow: for she may love and obey, but she cannot cherish, serve and keep him with that true duty which is ever expected.

She must know all Herbs.

To proceed then to this Knowledge of Cookery, you shall understand, that the first step thereunto is, to have knowledge of all sorts of Herbs belonging unto the Kitchin; whether they be for the Pot, for Sallets, for Sauces, for servings, or for any other seasoning or adorning; which skill of knowledge of the herbs, she must get by her own true labour and experience, and not by my relation, which would be much too tedious; and for the use of them, she shall see it in the composition of dishes and meat hereafter following. She shall also know the time of the year, moneth and Moon, in which all Herbs are to be sown; and when they are in their best flourishing, that gathering all herbs in their

height of goodness, she may have the prime use of the same. And because I will enable and not burden her Memory, I will here give her a short Epitomy of all that Knowledge.

Her Skill in the Garden.

First then, let our English House-wife know, that she may then at all times of the moneth and Moon generally sow Asparagus, Coleworts, Spinage, Lettuce, Parsnips, Raddish, and Chives.

In *February*, in the New of the Moon, she may sow Spike, Garlick, Borage, Bugloss, Chervile, Coriander, Gourds, Cresses, Marjerom, Palma Christi, Flower gentle, white Poppy, Purslane, Radish, Rocket, Rosemary, Sorrel, double Marygolds and Thyme. The Moon full she may sow Anniseed, Musked violets, Beets, Skirrits, white Succory, Fennel, and Parsley. The Moon old, sow Holy thistle, cole Cabbage, white cole, green cole, Cucumers, Hartshorn, Dyers grain, Cabbage, Lettuce, Mellons, Onions, Parsnips, Larks heel, Burnet, and Leeks.

In *March*, the Moon new sow Garlick, Borrage, Bugloss, Chervile, Coriander, Gourds, Marjerom, white Poypy, Purslane, Radish, Sorrel, double Marigolds, Thyme, Violets. At the full Moon, Anniseed, Beets, Skirrits, Succory, Fennel, Apples of Love, and Marvellous Apples. At the wain, Hartichokes, Basil, Blessed-thistle, Cole Cabbage, white Cole, green Cole, Citrons, Cucumers, Harts-horn, Samphire, Spinage, Gilly-flowers, Hyssop, Cabbage, Lettuce, Mellons, Mugrets, Onions, Flower Gentil, Burnet, Leeks, and Savory.

In *May*, the Moon old, Sow blessed thistle.

In *June*, the Moon new, Sow Gourds and Radishes. The Moon old, Sow Cucumers, Mellons, Parsnips.

In *July*, the Moon at full, Sow white Succory; and the Moon old, sow Cabbage Lettuce.

Lastly, in *August*, the Moon at the full, Sow white Succory.

Transplanting of Herbs.

Also she must know, that Herbs growing of Seeds may be transplanted at all times, except Chervile, Arage, Spinage and Parsley, which are not good being once transplanted: observing ever to transplant them in moist and rainy weather.

Choice of Seeds.

Also she must know, that the choice of seeds are two-fold, of which some grow best being new, as Cucumers and Leeks, and some

ſome being old, as Coriander, Parſley, Beets, Origan, Savory, Creſſes, Spinage, and Poppy: you muſt keep cold Lettuce, Artichokes, Baſil, Holy thiſtle, Cabbage, Cole, Dyers grain, and Mellons fifteen dayes after they put forth of the earth.

Alſo Seeds proſper better being ſown in temperate weather then in hot, cold or dry dayes. In the moneth of *April* the Moon being new, ſow Marjerom, Flower-gentle, Thyme, Violets. In the full Moon Apples of Love, and marvellous apples; and in the Wain, Artichoaks, Holy thiſtle, Cabbage, Cole, Citrons, Hartshorn, Samphire, Gillyflowers and Parſnips.

Seeds muſt be gathered in fair weather at the Wain of the Moon, and kept ſome in Boxes of Wood, ſome in bags of Leather, and ſome in Veſſels of Earth, and after to be well cleanſed and dryed in the Sun or ſhadow. Otherſome, as Onions, Chibols and Leeks, muſt be kept in their huſks. Laſtly, ſhe muſt know, that it is beſt to plant in the laſt quarter of the Moon; To gather grafts in the laſt but one, and to graft two dayes after the change. And thus much for her knowledg briefly of Herbs, and how ſhe ſhall have them continually for her uſe in the Kitchin. Gathering of Seeds.

It reſteth now that I proceed unto Cookery it ſelf, which is the dreſſing and ordering of meat, in good and wholſome manner; to which when our Houſe-wife ſhall addreſs her ſelf, ſhe ſhall well underſtand that theſe qualities muſt ever accompany it; Firſt, ſhe muſt be cleanly both in body and garments, ſhe muſt have a quick eye, a curious noſe, a perfect taſte, and ready ear; (ſhe muſt not be butter fingred, ſweet toothed, nor faint-hearted) for the firſt will let every thing fall; the ſecond will conſume what it ſhould encreaſe; and the laſt will loſe time with too much niceneſs. Of Cookery and the parts thereof.

Now for the ſubſtance of the Art it ſelf, I will divide it into five parts; The firſt, Sallets and Fricaſes; the ſecond, boyled Meats and Broths; the third, Roaſt meats and Carbonadoes; the fourth bak't meats and Pyes; and the fifth banquetting and made diſhes, with other conceits and ſecrets.

Firſt then to ſpeak of Sallets, there be ſome ſimple, ſome compounded, ſome only to furniſh out the Table, and ſome both for uſe and adornation: your ſimple Sallets are Chibols pilled, waſht clean, Of Sallets, ſimple and plain.

clean; and half of the green tops cut clean away, and so served on a fruit dish, or Chives, Scallions, Rhadish roots, boyled Carrets, Skirrets and Turnips, with such like served up simply: Also, all young Lettuce, Cabbage-Lettuce, Purslane, and divers other herbs which may be served simply without any thing but a little Vinegar, Sallet Oyl and Sugar; Onions boyled, and stript from their rind, and served up with Vinegar, Oyl and Pepper, is a good simple Sallet; so is Camphire, Bean cods, Sparagus, and Cucumers, served in likewise with Oyl, Vinegar and Pepper, with a world of others, too tedious to nominate.

Of compound Sallets.

Your compound Sallets, are first the young Buds and Knots of all manner of wholsome Herbs at their first springing; as red Sage, Mint, Lettuce, Violets, Marigolds, Spinage, and many other mixed together, and then served up to the Table with Vinegar, Sallet-Oyl, and Sugar.

Another compound Sallet.

To compound an Excellent Sallet, and which indeed is usual at great Feasts, and upon Princes Tables: Take a good quantity of blancht Almonds, and with your shredding knife cut them grosly; then take as many Raisins of the Sun clean washt, and the stones pickt out, as many Figs shred like the Almonds, as many Capers, twice so many Olives, and as many Currants as of all the rest, clean washt, a good handful of the small tender leaves of red Sage and Spinage: mixe all these well together with good store of Sugar, and lay them in the bottome of a great dish; then put unto them Vinegar and Oyl, and scrape more Sugar over all: then take Oranges and Lemmons, and paring away the outward pills, cut them into thin slices, then with those slices cover the Sallet all over; which done, take the fine thin leaf of the red Cole-flower, and with them cover the Oranges and Lemmons all over; then over those Red leaves lay another course of old Olives, and the slices of well pickled Cucumers, together with the very inward heart of Cabbage-lettuce cut into slices; then adorn the sides of the dish, and the top of the Sallet, with more slices of Lemons and Oranges, and so serve it up.

To make an excellent compound boyl'd Sallet; take of Spinage,

nage well washt, two or three handfuls, and put into it fair water, and boyl it till it be exceeding soft and tender as pap; then put it into a Cullender, and drain the water from it, which done, with the back side of your Chopping-knife chop it, and bruise it as small as may be; then put it into a Pipkin with a good lump of sweet butter, and boyl it over again; then take a good handful of Currants clean washt, and put to it, and stir them well together; then put to as much Vinegar as will make it reasonable tart, and then with Sugar season it according to the taste of the Master of the house, and so serve it upon sippets. An excellent boyled Sallet.

Your preserved Sallets are of two kinds, either pickled, as are Cucumers, Samphire, Purslane, Broom, and such like; or preserved with Vinegar, as Violets, Primroses, Cowslips, Gilly-flowers of all kinds, Broom-flowers, and for the most part any wholsome flower whatsoever. Of preserving of Sallets.

Now for the pickling of Sallets, they are only boyled and then drained from the water, spread upon a Table, and good store of salt thrown over them; then when they are thorow cold, make a pickle with water, salt, and a little Vinegar, and with the same pot them up in close earthen pots, and serve them forth as occasion shall serve.

Now for preserving of Sallets, you shall take any of the flowers before-said, after they have been pickt clean from their stalks, and the white ends (of them which have any) clean cut away, and washt and dryed, and taking a glass pot, like a Gally-pot, or for want thereof a gally-pot it self, and first strew a little Sugar in the bottom, then lay a layer of the Flowers, then cover that layer over with Sugar, then lay another layer of the Flowers, and another of Sugar; and thus do one above another till the pot be filled, ever and anon pressing them hard down with your hand: This done, you shall take of the best and sharpest Vinegar you can get, (and if the Vinegar be distilled vinegar, the flowers will keep their colours the better) and with it fill up your pot till the Vinegar swim aloft, and no more can be received; then stop up the pot close, and set them in a dry temperate place, and use them at pleasure, for they will last all the year.

Now

The making of Strange Sallets.

Now for the compounding of Sallets, of these pickled and preserved things, though they may be served up simply of themselves, and are both good and dainty; yet for better curiosity, and the finer adorning of the Table, you shall thus use them; First, if you would set forth any Red flower, that you know or have seen, you shall take your pots of preserved Gilly-flowers, and suting the colours answerable to the flower, you shall proportion it forth, and lay the shape of the Flower in a Fruit dish; then with your Purslane leaves make the green Coffin of the Flower, and with the Purslane stalks make the stalk of the flower, and the divisions of the leaves and branches; then with the thin slices of Cucumers, make their leaves in true proportions, jagged or otherwise: and thus you may set forth some full blown, some half blown, and some in the bud, which will be pretty and curious. And if you will set forth yellow flowers, take the pots of Primroses and Cowslips; if blew flowers, then the pots of Violets or Bugloss flowers; and these Sallets are both for shew and use, for they are more excellent for taste, then for to look on.

Sallets for shew only.

Now for Sallets for shew only, and the adorning and setting out of a Table with number of dishes, they be those which are made of Carret roots of sundry colours well boyled, and cut into many shapes and proportions, as some into Knots, some in the manner of Scutchions, and Arms, some like Birds, and some like Wild Beasts, according to the Art and cunning of the Workman; and these for the most part are seasoned with Vinegar, Oyl, and a little Pepper. A World of other Sallets there are, which time and experience may bring to our House-wifes eye, but the composition of them, and the serving of them, differeth nothing from these already rehearsed.

Of Fricases and Quelquechoses.

Now to proceed to your Fricases, or Quelquechoses, which are dishes of many compositions, and ingredients, as Flesh, Fish, Eggs, Herbs, and many other things, all being prepared and made ready in a Frying-pan, they are likewise of two sorts, simple and compound.

Of simple Fricases.

Your simple Fricases are Eggs and Collops fryed, whether the

the Collops be of Bacon, Ling, Beef, or young Pork, the frying whereof is so ordinary, that it needeth not any relation, or the frying of any Flesh, or Fish simple of it self with Butter or sweet Oyl.

To have the best Collops and Eggs, you shall take the whitest and youngest Bacon, and cutting away the sword, cut the Collops into thin slices, lay them in a dish, and put hot water unto them, and so let them stand an hour or two, for that will take away the extream saltness; then drain away the water clean, and put them in a dry pewter dish, and lay them one by one, and set them before the heat of the fire so as they may toast; and turn them so, as they may toast sufficiently thorow and thorow: which done, take your Eggs and break them into a dish, and put a spoonful of Vinegar unto them: then set a clean Skillet with fair water on the fire, and as soon as the water boyleth, put in the Eggs, and let them take a boyl or two; then with a spoon try if they be hard enough, and then take them up and trim them, and dry them, and then dishing up the Collops, lay the Eggs upon them, and so serve them up: and in this sort you may poach Eggs when you please, for it is the best and most wholesome. Best Collops and Eggs.

Now the compound Fricases are those which consist of many things, as Tansies, Fritters, Pancakes, and any Quelquechose whatsoever, being things of great Request and Estimation in *France*, *Spain*, and *Italy*, and the most curious Nations. Of the compound Fricases.

First, then for making the best Tansie, you shall take a certain number of Eggs, according to the bigness of your Frying-pan, and break them into a dish, abating ever the white of every third Egge: then with a spoon, you shall cleanse away the little white Chicken knots, which stick unto the yelks; then with a little Cream beat them exceedingly together: then take of green Wheat blades, Violet leaves, Strawberry leaves, Spinage, and Succory, of each a like quantity, and a few Walnut Tree buds; chop and beat all these very well, and then strain out the juyce, and mixing it with a little more Cream, put it to the Egs, and stir all well together; then put in a few Crums of bread, fine grated To make the best Tansey.

grated bread, Cinnamon, Nutmeg, and Salt; then put some sweet Butter into the Frying-pan, and so soon as it is dissolved or melted, put in the Tansey, and fry it brown without burning, and with a dish turn it in the pan as occasion shall serve; then serve it up, having strewed good store of Sugar upon it, for to put in Sugar before, will make it heavy: Some use to put of the herb Tansey into it, but the Walnut-Tree buds do give the better taste or relish, and therefore when you please for to use the one, do not use the other.

The best Fritters.

To make the best Fritters, take a pint of Cream and warm it; then take eight Eggs, only abate four of the Whites, and beat them well in a dish, and so mixe them with the Cream; then put in a little Cloves, Mace, Nutmeg and Saffron, and stirre them well together: then put in two spoonfuls of the best Ale barm, and a little Salt, and stirre it again, then make it thick according unto your pleasure with Wheat flower; which done, set it within the air of the fire, that it may rise and swell; which when it doth, you shall beat it in once or twice; then put into it a penny pot of Sack: All this being done, you shall take a pound or two of very sweet seame, and put it into a pan, and set it over the fire, and when it is moulten, and begins to bubble, you shall take the Fritter-batter, and setting it by you, put thick slices of well pared Apples into the Batter, and then taking the Apples and Batter out together with a spoon, put it into the boyling seam, and boyl your Fritters crisp and brown: And when you find the strength of your seame consume or decay, you shall renew it with more seame: and of all sorts of seame, that which is made of the Beef-suet is the best and strongest: when your Fritters are made, strew good store of Sugar and Cinnamon upon them, being fair disht, and so serve them up.

The best Pancakes.

To make the best Pancakes, take two or three Eggs, and break them into a dish, and beat them well; then adde unto them a pretty quantity of fair running Water, and beat all well together: then put in Cloves, Mace, Cinnamon and Nutmeg, and season it with Salt; which done, make it as thick as you

you think good with fine Wheat-flower, then fry the Cakes as thin as may be with ſweet butter, or ſweet ſeame, and make them brown, and ſo ſerve them up with Sugar, ſtrewed upon them. There be ſome which mixe Pancakes with new Milk or Cream, but that makes them tough, cloying, and not ſo criſp, pleaſant and ſavory as running water.

Veal Toſts.

To make the beſt Veal Toaſts, take the Kidney, fat and all, of a loyn of Veal roſted, and ſhred it as ſmall as is poſſible; Then take a couple of Eggs and beat them very well; which done, take Spinage, Succory, Violet-leaves, and Marigold-leaves, and beat them, and ſtrain out the juyce, and mixe it with the Eggs: then put it to your Veal, and ſtirre it exceedingly well in a diſh; then put to good ſtore of Currants clean waſht and pickt, Cloves, Mace, Cinnamon, Nutmeg, Sugar, and Salt, and mixe them all perfectly well together: then take a manchet and cut it into Toſts, and toſte them well before the fire; then with a ſpoon lay upon the Toſt in a good thickneſs, the Veal, prepared as before-ſaid; which done, put into your Frying-pan good ſtore of ſweet butter, and when it is well melted and very hot, put your Toaſts into the ſame with the bread ſide upward, and the fleſh ſide downward; and as ſoon as you ſee they are fryed brown, lay upon the upper ſide of the Toſts which are bare, more of the fleſh meat, and then turn them, and fry that ſide brown alſo; then take them out of the pan, and diſh them up, and ſtrew Sugar upon them, and ſo ſerve them forth.

There be ſome Cooks which will do this but upon one ſide of the Toſts, but to do it on both is much better; if you add Cream it is not amiſs.

To make the beſt Pamperdy.

To make the beſt Pamperdy, Take a dozen Eggs, and break them, and beat them very well; then put unto them Cloves, Mace, Cinnamon, Nutmeg, and good ſtore of Sugar, with as much Salt as ſhall ſeaſon it: then take a Manchet, and cut it into thick ſlices like Toaſts; which done, take your Frying-pan, and put into it good ſtore of ſweet butter, and being melted, lay in your ſlices of bread, then pour upon them one half of your Eggs, then when it is fryed, with a diſh turn your ſlices of bread upward, and then

pour on them the other half of your Eggs, and so turn them till both sides be brown; then dish it up, and serve it with Sugar strewed upon it.

To make any Quelquechose.

To make a *Quelquechose*, which is a mixture of many things together; Take the Eggs and break them, and do away one half of the Whites, and after they are beaten, put them to a good quantity of sweet Cream, Currants, Cinnamon, Cloves, Mace, Salt, and a little Ginger, Spinage, Endive, and Mary-gold flowers grosly chopt, and beat them all very well together; then take Pigs Pettitoes slic'd and grosly chopt, mixe them with the Eggs, and with your hand stirre them exceeding well together; then put in sweet Butter in your Frying-pan, and being melted, put in all the rest, and fry it brown without burning, ever & anon turning it, till it be fryed enough; then dish it upon a flat plate, and so serve it forth. Onely here is to be observed, that your Pettitoes must be very well boyled before you put them into the Fry-case.

Additions to the House-wife.

And in this manner as you make this *Quelquechose*, so you may make any other, whether it be of flesh, small Birds, sweet Roots, Oysters, Muscles, Cockles, Giblets, Lemons, Oranges, or any Fruit, Pulse, or other Sallet herb whatsoever; of which to speak severally, were a Labour infinite, because they vary with mens opinions. Onely the composition and work is no other than this before prescribed: and who can do these, need no further instruction for the rest. And thus much for *Sallets* and *Fricases*.

Cookery.

To make Fritters.

To make Fritters another way; Take Flower, Milk, Barm, grated bread, small Raisins, Cinnamon, Sugar, Cloves, Mace, Pepper, Saffron, and Salt; stirre all these together very well with a strong spoon or small ladle, then let it stand more than a quarter of an hour, that it may rise; then beat it in again, and thus let it rise, and be beat in twice or thrice at least; then take it and bake them in sweet and strong seame, as hath been before shewed, and when they are served up to the Table, see you strew upon them good store of Sugar, Cinnamon and Ginger.

To make the best white Puddings.

Take a pint of the best, thickest and sweetest Cream, and boyl it, then whilst it is hot, put thereunto a good quantity of great sweet

ſweet Oatmeal, Grots very ſweet, and clean pickt, and formerly ſteept in milk twelve hours at leaſt, and let it ſoak in this Cream another night; then put thereto at leaſt eight yelks of Eggs, a little Pepper, Cloves, Mace, Saffron, Currants, Dates, Sugar, Salt, and great ſtore of Swines Suet, or for want thereof, great ſtore of Beef Suet, and then fill it up in the farmes according unto the order of good Houſe-wifery; and then boyl them on a ſoft and gentle fire, and as they ſwell, prick them with a great Pin, or ſmall Awl, to keep them that they burſt not; and when you ſerve them to the Table, *(which muſt not be untill they be a day old)* firſt boyl them a little, then take them out, and toaſt them brown before the fire, and ſo ſerve them, trimming the edge of the diſh either with Salt or Sugar.

Puddings of a Hogs Liver.

Take the Liver of a fat Hogg, and parboyl it; then ſhred it ſmall, and after beat it in a Mortar very fine; then mixe it with the thickeſt and ſweeteſt Cream, and ſtrain it very well through an ordinary ſtrainer: then put thereto ſix yelks of Eggs and two Whites, and the grated crums of (near hand) a penny White loaf with good ſtore of Currants, Dates, Cloves, Mace, Sugar, Saffron, Salt, and the beſt Swines-ſuet, or Beef-ſuet, but Beef-ſuet is the more wholſome, and leſs looſning; then after it hath ſtood a while, fill it into the Farms, and boyl them as before ſhewed: and when you ſerve them unto the Table, firſt boyl them a little, then lay them on a Gridiron over the coals, and broyl them gently, but ſcorch them not, nor in any wiſe break their skins, which is to be prevented by oft turning and toſſing them on the Gridiron, and keeping a ſlow fire.

To make bread Puddings.

Take the Yelks and Whites of a dozen or fourteen Eggs, and having beat them very well, put unto them the fine powder of Cloves, Mace, Nutmegs, Sugar, Cinnamon, Saffron, and Salt; then take the quantity of two loaves of white grated Bread, Dates very ſmall ſhred, and great ſtore of Currants, with good plenty either of Sheeps, Hogs or Beef ſuet beaten and cut ſmall: then when all is mixt, and ſtirred well together, and hath ſtood a while to ſettle, then fill it into the Farms, as hath been before

shewed, and in like manner boyl them, cook them, and serve them to the Table.

Rice Puddings. Take half a pound of Rice, and steep it in new milk a whole night, and in the morning drain it, and let the milk drop away, and take a quart of the best, sweetest, and thickest Cream, and put the Rice into it and boyl it a little; then set it to cool an hour or two, and after put in the Yelks of half a dozen Eggs, a little Pepper, Cloves, Mace, Currants, Dates, Sugar and Salt; and having mixt them well together, put in great store of Beef suet well beaten, and small shred, and so put it into the farms, and boyl them as before shewed, and serve them after a day old.

Another of Liver. Take the best Hogs Liver you can get, and boyl it extreamly, till it be as hard as a stone, then lay it to cool, and being cold, upon a bread-grater grate it all to powder; then sift it through a fine meal-sieve, and put to it the crums of (at least) two penny loaves of white bread, and boyl all in the thickest and sweetest Cream you have, till it be very thick; then let it cool, and put to it the yelks of half a dozen Eggs, a little Pepper, Cloves, Mace, Currants, Dates small shred, Cinnamon, Ginger, a little Nutmeg, good store of Sugar, a little Saffron, Salt, and of Beef and Swines suet great plenty, then fill it into the Farms, and boyl them as before shewed.

Puddings of a Calves Mugget. Take a Calves Mugget, clean and sweet dreſt, and boyl it well; then shred it as small as is possible, then take of Strawberry leaves, of Endive, Spinage, Succory, and Sarnel, of each a pretty quantity, and chop them as small as is possible, and then mixe them with the Mugget; then take the yelks of half a dozen Eggs, and three whites, and beat them into it also; and if you find it is too stiff, then make it thinner with a little Cream warmed on the fire, then put in a little Pepper, Cloves, Mace, Cinnamon, Ginger, Sugar, Currants, Dates, and Salt, and work all together, with casting in little pieces of sweet Butter one after another, till it have received good store of Butter, then put it up in the Calves-bag, Sheeps-bag, or Hogs-bag, and then boyl it well, and so serve it up.

Take

Take the blood of a Hogg whilst it is warm, and steep it in a quart or more of great Oat-meal grotes, and at the end of three dayes with your hands take the Grotes out of the blood, and drain them clean; then put to those Grotes more than a quart of the best Cream warm'd on the fire; then take mother of Thyme, Parsley, Spinage, Succory, Endive, Sorrel and Strawberry leaves, of each a few chopt exceeding small, and mixe them with the Grotes, and also a little Fennel-seed finely beaten, then adde a little Pepper, Cloves and Mace, Salt, and great store of suet finely shred, and well beaten: then therewith fill your Forms, and boyl them, as hath been before described. A Pudding.

Take the largest of your Chines of Pork, and that which is called a Lift, and first with your Knife cut the lean thereof into thin slices, and then shred small those slices, and then spread it over the bottome of a dish or woodden platter: then take the fat of the Chine and the liste, and cut it in the very self-same manner, and spread it upon the lean, and then cut more lean, and spread it upon the fat, and thus do one lean upon another, till all the Pork be shred, observing to begin and end with the lean: then with your sharp Knife scotch it through and through divers wayes, and mixe it all well together: then take good store of Sage, and shred it exceeding small, and mixe it with the flesh: then give it a good season of Pepper and Salt, then take the forms made as long as is possible, and not cut in pieces as for puddings, and first blow them well to make the meat slip, and then fill them: which done, with threds divide them into several links as you please; then hang them up in the corner of some Chimny clean kept, where they may take air of the fire, and let them dry there at least four dayes before any be eaten; and when they are served up, let them be either fryed or broyled on the Gridiron, or else roasted about a Capon. Links.

It resteth now that we speak of boyl'd meat and broths, which forasmuch as our House-wife is intended to be general, one that can as well feed the poor as the rich, we first begin with those ordinary wholsome boyl'd meats which are of use in every good mans house; therefore to make the best ordinary Pottage, you shall Of boyled meats ordinary.

shall take a rack of mutton cut into pieces, or a leg of mutton cut into pieces; for this meat, and these joynts are the best, although any other joynt or any fresh Beef will likewise make good Pottage; and having washt your meat well, put it into a clean pot with fair water, and set it on the fire, then take *Violet* leaves, *Succory*, *Strawberry* leaves, *Spinage*, *Langdebeef*, *Marygold* flowers, *Scallions*, and a little *Parsley*, and chop them very small together; then take half so much Oat-meal well beaten as there is herbs, and mixe it with the herbs, and chop all very well together, then when the pot is ready to boyl, scum it very well, and then put in your Herbs, and so let it boyl with a quick fire, stirring the meat oft in the pot, till the meat be boyl'd enough, and that the herbs and water are mixt together without any separation, which will be after the consumption of more than a third part: Then season them with salt, and serve them up with the meat, either with sippets or without.

Pottage without sight of herbs.

Some desire to have their Pottage green, yet no herbs to be seen, in this case you must take your herbs and Oatmeal, and after it is chopt put it into a stone mortar or bowl, and with a wooden pestel beat it exceedingly, then with some of the warm liquor in the pot strain it as hard as may be, and so put it in and boyl it.

Pottage without herbs.

Others desire to have pottage without any herbs at all, and then you must only take Oat-meal beaten, and good store of Onions, and put them in and boyl them together; and thus doing you must take a greater quantity of oatmeal then before.

Pottage with herbs.

If you will make Pottage of the best and daintiest kind, you shall take Mutton, Veal or Kid, and having broken the bones, but not cut the flesh in pieces, and washt it, put it into a pot with fair water; after it is ready to boyl, and throughly scum'd, you shall put in a good handful or two of small Oatmeal: and then take whole Lettuce of the best and most inward leaves, whole Spinage, Endive, Succory, and whole leaves of Cole-flowers, or the inward part of white Cabbage, with two or three slic't Onions, and put all into the pot, and boyl them well together till the meat be enough, and the Herbs so soft as may be, and stirre them oft well together; and then season it with salt, and as much Verjuyce as will

will onely turn the taste of the Pottage; and to serve them up, covering the meat with the whole herbs, and adorning the dish with sippets.

To make ordinary stew'd broth. To make ordinary stew'd broth, you shall take a neck of Veal, or a legg, or marrow-bone of Beef, or a pullet, or mutton, and after the meat is washt, put it into a pot with fair water, and being ready to boyl, scum it well; then you shall take a couple of Manchets, and paring away the crust, cut it into thick slices, and lay them in a dish, and cover them with hot broth out of the pot; when they are steept, put them and some of the broth into a strainer and strain it, and then put it into a pot: then take half a pound of Prunes, half a pound of Raisins, and a quarter of a pound of Currants clean pickt and washt, with a little whole Mace, and two or three bruised Cloves, and put them into the pot, and stirre all well together, and so let them boyl till the meat be enough, then if you will alter the colour of the broth, put in a little Turnsoyl or red Sanders, and so serve it upon sippets, and the fruit uppermost.

A fine boyled meat. To make an excellent boyled meat, take four pieces of a rack of mutton, and wash them clean, and put them into a pot well scoured with fair water; then take a good quantity of Wine and Verjuyce, and put it into it; then slice a handful of Onions, and put them in also, and so let them boyl a good while, then take a piece of sweet Butter with Ginger and Salt, and put it to also, and then make the broth thick with grated bread, and so serve it forth with sippets.

To boyl a Mallard. To boyl a *Mallard* curiously, take the *Mallard* when it is fair dressed, washed and trust, and put it on a spit and roast it till you get the gravy out of it; then take it from the spit and boyl it; then take the best of the broth into a pipkin, and the gravy which you saved, with a piece of sweet Butter, and Currants, Vinegar, Pepper, and grated Bread: Thus boyl all these together, and when the *Mallard* is boyled sufficiently, lay it on a dish with sippets, and the broth upon it, and so serve it forth.

To make an excellent *Olepotride*, which is the only principal dish

dish of boyled meat which is esteemed in all *Spain*; you shall take a very large vessel Pot or Kettle, and filling it with water, you shall set it on the fire, and first put in good thick gobbets of well fed Beef, and being ready to boyl, scum your pot; when the Beef is half boyled, you shall put in Potato-roots, Turneps and Carrets; also like gobbets of the best Mutton, and the best Pork: after they have boyled a while, you shall put in the like gobbets of Venison Red and Fallow if you have them; then the like gobbets of Veal, Kid, and Lamb; a little space after these, the fore-parts of a fat Pigge, and a cramb'd Pullet; then put in Spinage, Endive, Succory, Marygold leaves and flowers, Lettuce, Violet leaves, Strawberry leaves, Bugloss and Scallions all whole and unchopt, then when they have boyled a while, put in a Partridge and a Chicken chopt in pieces, with Quails, Rayls, Black Birds, Larks, Sparrows, and other small Birds; all being well and tenderly boyled, season up the broth with good store of Sugar, Cloves, Mace, Cinnamon, Ginger and Nutmeg, mixt together in a good quantity of Verjuyce and Salt, and so stirre up the pot well from the bottome: then dish it up upon great Chargers or long Spanish dishes laying store of sippets in the bottome: then cover the meat all over with Prunes, Raisins, Currants, and blancht Almonds, boyled in a thing by themselves; then cover the fruit and the whole boyled herbs, and the herbs with slices of Oranges and Lemmons, and lay the roots round about the sides of the dish, and strew good store of Sugar all over, and so serve it forth.

To make the best white broth.

To make the best white broth, whether it be with Veal, Capon, Chickens, or any other Fowl or Fish; First boyl the flesh or fish by it self, then take the value of a quart of strong mutton broth, or sad Kid broth, and put it into a pipkin by it self, and put into it a bunch of Thyme, Marjerom, Spinage, and Endive bound together; then when it seethes, put in a pretty quantity of Beef marrow, and the marrow of mutton, with some whole Mace, and a few bruised Cloves: then put in a pint of White Wine, with a few whole slices of Ginger: after they have boyled a while together, take blancht Almonds, and having beaten them together in a mortar with some of the broth, strain them and

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put it in also: then in another Pipkin boyl Currants, Prunes, Raisins and whole Cinnamon in Verjuyce and Sugar with a few sliced Dates, and boyl them till the Verjuyce be most part consumed, or at least come to syrup; then drain the fruit from the syrup, and if you see it be high coloured, make it white with sweet Cream warmed, and so mixe it with your Wine broth; then take out the Capon or the other flesh or fish, and dish it up dry in a dish; then pour the broth upon it, and lay the fruit on the top of the meat, and adorn the side of the dish with very dainty sippets, First Oranges, Lemons and Sugar, and so serve it forth to the Table.

To boyl any wild Fowl, *Mallard, Teal, Widgeon*, or such like: First boyl the Fowl by it self, then take a quart of strong Mutton broth, and put it into a Pipkin and boyl it; then put unto it good store of sliced Onions, a bunch of sweet pot herbs, and a lump of sweet butter: after it hath boyled well, season it with Verjuyce, Salt and Sugar, and a little whole Pepper; which done, take up your fowl and break it according to the fashion of Carving, and stick a few Cloves about it; then put it into the broth with Onions, and there let it take a boyl or two, and so serve it and the broth forth upon the sippets: Some use to thicken it with toasts of bread steept and strained; but that is as pleases the Cook. To boyl any wild Fowl.

To boyl a legg of *Mutton*, or any other Joynt of meat whatsoever; first after you have washt it clean, parboyl it a little, then spit it and give it half a dozen turns before the fire, then draw it when it begins to drop, and press it between two dishes, and save the gravie; then slash it with your Knife, and give it half a dozen turnes more, and then presse it again: and thus do as often as you can force any moisture to come from it; then mixing Mutton Broth, White Wine, and Verjuyce together, boyl the Mutton therein till it be tender, and that most part of the liquor is clean consumed; then having all that while kept the gravy you took from the Mutton, stewing gently upon a Chafing-dish and coals, you shall adde unto it good store of Salt, Sugar, Cinnamon and Ginger, with some Lemon slices, and a little of an Orange peel, with a few fine white bread crums; then taking up the Mutton, put the remainder of the broth in To boyl a leg of Mutton.

and put in likewise the gravy, and then serve it up with sippe s, laying the Lemon slices uppermost, and trimming the dish about with Sugar.

If you will boyl Chickens, young Turkeys, Pea-hens, or House fowl daintily; you shall, after you have trimmed them, drawn them, trust them, and washt them, fill their bellies as full of Parsley as they can hold; then boyl them with salt and water only, till they be enough: then take a dish and put into it Verjuyce and Butter, and Salt, and then when the butter is melted, take the Parsly out of the Chickens belly, and mince it very small, and then put to it the Verjuyce and Butter, and stirre it well together; then lay in the Chickens, and trim the dish with sippets and so serve it forth.

A broth for any fresh Fish.

If you will make broth with any fresh Fish whatsoever, whether it be Pike, Bream, Carp, Eel, Barbel, or such like, you shall boyl water, Verjuyce and Salt together with a handful of sliced Onions; then you shall thicken it with two or three spoonfuls of Ale barm, then put in a good quantity of whole Barberies, both branches and other, as also pretty store of Currants: then when it is boyled enough, Dish up your Fish and pour your broth unto it, laying your fruit and Onions uppermost. Some to this broth will put Prunes and Dates sliced, but it is according to the fancy of the Cook, or the Will of the Housholder.

Additions to boyl meat.

Thus I have from these few Presidents shewed you the true Art and making of all sorts of boyled meats and broths, and though men may coyn strange names, and feign strange Arts, yet be assured she that can do these, may make any other whatsoever, altering the taste by the alteration of the compounds as she shall see occasion: And when a broth is too sweet, to sharpen it with verjuyce; when too tart, to sweeten it with Sugar; when flat and wallowish, to quicken it with Oranges and Lemons; and when too bitter, to make it pleasant with Herbs and Spices.

A Mallard smoared, or a Hare, or old Cony.

Take a Mallard when it is clean dressed, washed and trust, and parboyl it in water, till it be scumm'd and purified; then take it up, and put it into a Pipkin with the neck downward, and the tayl upward, standing as it were upright; then fill the Pipkin half full

full with that water in which the Mallard was parboyled, and fill up the other half with white Wine; then peel and slice thin a good quantity of Onions, and put them in with whole fine herbs, according to the time of the year, as Lettuce, Strawberry leaves, Violet leaves, Vine leaves, Spinage, Endive, Succory, and such like, which have no bitter or hard taste, and a pretty quantity of Currants and Dates sliced; then cover it close, and set it on a gentle fire, and let it stew, and smoat till the Herbs and Onions be soft, and the Mallard enough, then take out the Mallard, and Carve it as if it were to go to the Table: then to the Broth put a good lump of Butter, Sugar, Cinnamon; and if it be in Summer, so many Gooseberries as will give it a sharp taste; but in the Winter, as much Wine Vinegar; then heat it on the fire, and stir all well together: then lay the Mallard in a Dish with sippets, and pour all this broth upon it, then trim the edge of the dish with Sugar, and so serve it up. And in this manner you may also smoar the hinder parts of a Hare, or a whole old Cony, being trust up close together.

To stew a Pike.

After your Pike is dresst and opened in the back, and laid flat, as if it were to fry, then lay it in a large dish for the purpose, able to receive it; then put as much White Wine to it as will cover it all over; then set it on a chafing-dish and Coals to boyl very gently, and if any scum arise, take it away; then put to it Currants, Sugar, Cinnamon, Barberries, and as many Prunes as will serve to garnish the dish, then cover it close with another dish, and let it stew till the fruit be soft, and the Pike enough; then put to it a good lump of sweet Butter; then with a fine Scummer take up the fish, and lay it in a clean dish with sippets, then take a couple of yelks of eggs, the film taken away, and beat them well together with a spoonful or two of Cream, and as soon as the Pike is taken out put it into the broth and stir it exceedingly to keep it from curding; then pour the broth upon the Pike, and trim the sides of the dish with Sugar, Prunes, and Barberies, slices of Oranges or Lemons, and so serve it up. And thus may you also stew Roches, Gurnets, or almost any Sea fish or fresh fish.

To stew a Lamb's head & Purtenance.

Take a Lambs head and Purtenance, clean washt and pickt, and put it into a Pipkin with fair water, and let it boyl, and scum it

it clean, then put Currants and a few sliced Dates, and a bunch of the best farcing herbs tyed up together, and so let it boyl well till the meat be enough; then take up the Lambs head and Purtenance, and put it into a clean dish with sippets; then put in a good lump of Butter, and beat the yelks of two eggs with a little Cream, and put it to the broth with Sugar, Cinnamon, and a spoonful or two of Verjuyce and whole Mice, and as many Prunes as will garnish a dish, which should be put in when it is but half boyled, and so pour it upon the Lambs head and Purtenance, and adorns the sides of the dish with Sugar, Prunes, Barberries, Oranges and Lemons; and in no case forget to season it well with Salt, and to serve it up.

A Breast of Mutton stew'd.

Take a very good brest of Mutton chopt into sundry large pieces, and when it is clean washt, put it into a pipkin with fair water, and set it on the fire to boyl; then scum it very well, then put in of the finest Parsnips cut into large pieces as long as ones hand, and clean washt and scrap't; then good store of the best Onions, and all manner of sweet pleasant Pot-herbs and Lettuce, all grosly chopt, and good store of Pepper and Salt, and then cover it, and let it stew till the mutton be enough, then take up the mutton, and lay it in a clean dish with sippets, and to the broth put a little wine vinegar, and so pour it on the mutton with the Parsnips whole, and adorn the sides of the dish with Sugar, and so serve it up. And as you do with the brest, so you may do with any other Joynt of Mutton.

To stew a Neats foot.

Take a Neats foot that is very well boyl'd (for the tenderer it is, the better it is) and cleave it in two, and with a clean cloth dry it well from the Souse-drink, then lay it in a deep earthen platter and cover it with Verjuyce, then set it on a Chafing-dish and coals, and put to it a few Currants and as many Prunes as will garnish the dish, then cover it and let it boyl well, many times stirring it up with your Knife, for fear it stick to the bottome of the dish; then when it is sufficiently stewed; which will appear by the tenderness of the meat and softness of the fruit; then put in a good lump of butter, great store of Sugar and Cinnamon; and let it boyl a little after; then put it all together into a clean dish with sippets, and adorn the sides of the dish with Sugar and Prunes, and so serve it up.

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To proceed then to Roaſt meats, it is to be underſtood, that in the general knowledge thereof are to be obſerved theſe few Rules: Firſt the clean keeping and ſcouring of the ſpits and cob-irons; Next, the neat picking and waſhing of meat, before it be ſpitted, then the ſpitting and broaching of meat, which muſt be done ſo ſtrongly and firmly, that the meat may by no means either ſhrink from the ſpit, or elſe turn about the ſpit; and yet ever to obſerve, that the ſpit do not go through any principal part of the meat, but ſuch as is of leaſt account and eſtimation; and if it be birds or fowl which you ſpit, then to let the ſpit go through the hollow of the body of the fowl, and ſo faſten it with pricks or skewers under the wings about the thighs of the fowl, and at the feet or Rump, according to your manner of truſſing and dreſſing them.

Of Roaſt meats.

Obſervations in roaſt meats.

Spitting of roaſt meats.

Then to know the Temperatures of fires for every meat, and which have a ſlow fire, and yet a good one, taking leiſure in roaſting, as Chines of Beef, Swans, Turkies, Peacocks, Buſtards, and generally any great large Fowl, or any other Joynts of Mutton, Veal, Duck, Kid, Lamb, or ſuch like: whether it be Veniſon red or Fallow; which indeed would lye long at the fire, and ſoak well in the roaſting, and which would have a quick and ſharp fire without ſcorching; as Pigs, Pullets, Pheaſants, Partridges, Quails, and all ſorts of middle ſized, or leſs fowl, and all ſmall birds, or compound roaſt meats, as Olives of Veal, Harſlets; a pound of butter roaſted, or puddings ſimple of themſelves, and many other ſuch like, which indeed would be ſuddenly and quickly diſpatcht, becauſe it is intended in Cookery, that one of theſe diſhes muſt be made ready whilſt the other is in eating. Then to know the complexions of meats, as which muſt be pale and white roaſted, and yet throughly roaſted, as Mutton, Lamb, Kid, Capon, Pullet, Pheaſant, Partridge, Veal, Quail, and all ſorts of middle and ſmall land or water-Fowl, and all ſmall Birds; which muſt be ſo brown roaſted, as Beef, Veniſon, Pork, Swan, Geeſe, Piggs, Crane, Buſtards, or any large Fowl, or other thing whoſe fleſh is black.

Temperature of fires.

The complexions of meat.

Then to know the beſt baſtings for meat, which is ſweet Butter, ſweet Oyl, Barrel Butter, or fine rendred up ſeam, with Cinnamon, Cloves and Mace. There be ſome that will baſte

The beſt baſtings of Meats.

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onely with Water and Salt, and nothing else: yet it is but opinion, and that must be the Worlds Master alwayes.

The best dredging. Then the best dredging, which is either fine white bread crums well grated; or else a little very white meal, and the crums very well mixt together.

To know when meat is enough. Lastly to know when meat is rosted enough; for as too much rawnes is unwholsome, so too much dryness is not nourishing. Therefore to know when it is in the perfect height, and is neither too moist nor too dry, you shall observe these signs: First, in your large Joynts of meat, when the steam or smoak of the meat ascendeth either upright, or else goeth from the fire, when it beginneth a little to shrink from the spit, or when the gravy which droppeth from it is clear without bloodiness, then is the meat enough.

If it be a Pigge, when the eyes are fallen out, and the body leaveth Piping: for the first is when it is half roasted, and would be sindged to make the coat rise, and crackle, and the later when it is full enough, and would be drawn; or if it be any kind of Fowl you roast, when the thighs are tender, or the hinder parts of the pinions at the setting on of the wings, are without blood, then be sure that your meat is fully enough roasted: yet for a better and more certain assuredness, you may thrust your Knife into the thickest parts of the meat, and draw it out again, and if it bring out white gravy without any bloodiness, then assuredly it is enough, and may be drawn with all speed convenient, after it hath been well basted with butter not formerly melted, then dredging as aforesaid, then basted over the dredging and so suffered to take two or three turns, to make crispe the dredging: Then dish it in a fair dish with salt sprinkled over it, and so serve it forth. Thus you see the general form of roasting all kind of meats: Therefore now I will return to some particular dishe, together with their several Sauces.

Roasting of Mutton with Oysters. If you will roast Mutton with Oysters, take a shoulder alone or a legg, and after it is washt, parboyl it a little; then take the great Oysters, and having opened them into a dish, drain the gravy clean from them twice or thrice, then parboyl them a little, then take Spinage, Endive, Succory, Strawberry leaves, Violet leaves and a little Parsly, with some Scallions; chop these very small

ſmall together, then take your Oyſters very dry drain'd and mix them with an half part of theſe herbs; then take your meat, and with theſe Oyſters and herbs farce or ſtop it, leaving no place empty, then ſpit it and roaſt it, and whilſt it is in roſting, take good ſtore of Verjuice and Butter, and Salt, and ſet it in a diſh on a chafing-diſh and coals; and when it begins to boyl, put in the remainder of your herbs without Oyſters, and a good quantity of Currants, with Cinnamon, and the yelks of a couple of eggs. And after they are well boyled and ſtirred together, ſeaſon it up according to your taſte with Sugar; then put in a few Lemon ſlices; the meat being enough draw it, and lay it upon this ſawce removed into a clean diſh, the edge thereof being trimmed about with Sugar, and ſo ſerve it forth.

To roaſt a Leg of Mutton after an Outlandiſh faſhion, your ſhall take it after it is waſh'd, and cut off all the fleſh from the bone, leaving only the outmoſt skin intirely whole and faſt to the bone; then take thick Cream and the yelks of eggs, and beat them exceedingly well together, then put to Cinnamon, Mace, and a little Nutmeg with Salt; then take bread crums finely grated and ſearſt with good ſtore of Currants, and as you mixe them with the Cream, put in Sugar and ſo make it into a good ſtiffneſs. Now if you would have it look green, put in the juyce of ſweet herbs, as Spinage, Violet leaves, Endive, &c. If you would have it yellow, then put in a little Saffron ſtrained, and with this fill up the skin of your legg of Mutton in the ſame ſhape and form that it was before, and ſtick the out-ſide of the skin thick with Cloves, and ſo roaſt it throughly, and baſte it very well, then after it is dredg'd, ſerve it up as a legg of Mutton with this Pudding; for indeed it is no other: you may ſtop any other Joynt of meat, as breſt or loyn, or the belly of any fowl boyled or roaſt, or Rabbet or any meat elſe which hath skin or emptineſs. If into this Pudding alſo you beat the inward pith of an Oxes back, it is both good in taſte, and excellent ſoveraign for any diſeaſe, ach, or flux in the reins whatſoever. *To roaſt a legg of Mutton otherwiſe.*

To roaſt a Jigget of Mutton, which is the legg ſplatted and half part of the loyn together, you ſhall after it is waſht ſtop it with Cloves, ſo ſpit it and lay it to the fire, and tend it well with baſting; then you ſhall take Vinegar, Butter and Currants, and *To roaſt a Jigget of Mutton.*

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set them on a fire in a dish or pipkin; then when it boyles you shall put in sweet herbs finely chopt, with the yelk of a couple of eggs, and so set them boyl together: then the meat being half rosted, you shall pare off some part of the leanest and brown, then shred it very small, and put it into the pipkin also; then season it up with Sugar, Cinnamon, Ginger and Salt, and so put it into a clean dish, then draw the Jigget of Mutton and lay it on the sawce, and throw salt on the top and so serve it up.

To roast Olaves of Veal.

You shall take a legg of Veal, and cut the flesh from the bones, and cut it out into thin long slices; then take sweet herbs and the white part of Scallions, and chop them well together with the yelks of eggs, then roule it up within the slices of Veal, and so spit them and roast them; then boyl Verjuyce, Butter, Sugar, Cinnamon, Currants, and sweet herbs together, and being seasoned with a little salt, serve the Olives up upon the sauce with salt cast over them.

To roast a Pig.

To roast a Pig curiously, you shall not scall'd it, but draw it with the hair on, then having washt it, spit it and lay it to the fire, so as it may not scorch, then being a quarter roasted, and the skin blistered from the flesh, with your hand pull away the hair and skin, and leave all the fat and flesh perfectly bare; then with your Knife scotch all the flesh down to the bones, then baste it exceedingly with sweet Butter and Cream, being no more but warm: then dredge it with fine bread crums, Currants, Sugar, and Salt mixt together; and thus apply dredging upon basting, and basting upon dredging, till you have covered all the flesh a full inch deep: Then the meat being fully roasted, draw it, and serve it up whole.

To roast a pound of Butter well.

To roast a pound of Butter curiously and well, you shall take a pound of sweet Butter, and beat it stiff with Sugar and the yelks of Eggs, then clap it round-wise about a spit, and lay it before a soft fire, and presently dredge it with the dredging before appointed for the Pig; then as it warmeth or melteth, so apply it with dredging till the Butter be overcomed, and no more will melt to fall from it; then roast it brown, and so draw it, and serve it out, the dish being as neatly trim'd with Sugar as may be.

To roast a Pudding upon a spit, you shall mixe the Pudding be-

beforeſpoken of in the leg of Mutton, neither omitting herbs or ſaffron, and put to a little ſweet butter and mix it very ſtiff, then fold it about the ſpit, and have ready in another diſh ſome of the ſame mixture well ſeaſoned, but a great deal thinner, and no butter at all in it; and when the pudding doth begin to roaſt, and that the butter appears, then with a ſpoon cover it all over with the thinner mixture, and ſo let it roſt: then if you ſee no more butter appear, then baſte it as you did the Pig, and lay more of the mixture on, and ſo continue till all be ſpent; and then roaſt it brown and ſo ſerve it up.

To roaſt a pudding on a ſpit.

If you will Roaſt a Chine of Beef, a loyn of Mutton, a Capon, and a Lark, all at one inſtant, and at one fire, and have all ready together and none burnt, you ſhall firſt take your Chine of Beef and parboyl it more than half through: Then firſt take your Capon, being large and fat, and ſpit it next the hand of the turner, with the legs from the fire, then ſpit the Chine of Beef then the Lark, and laſtly the loyn of Mutton, and place the Lark ſo as it may be covered over with the beef and the fat part of the Loyn of Mutton, without any part diſcloſed; then baſte your Capon and your loyn of Mutton with cold water and ſalt, the Chine of beef with boyling Lard, then when you ſee the beef is almoſt enough, which you ſhall haſten by ſcotching and opening of it, then with a clean cloth you ſhall wipe the Mutton and Capon all over, and then baſte it with ſweet butter till all be enough roſted: then with your knife lay the Lark open, which by this time will be ſtewed between the beef and mutton, and baſting it alſo with dredge altogether, draw them and ſerve them up.

To roaſt a Chine of beef, Loyn of Mutton, Lark and Capon at one fire, and at one inſtant.

If you will Roaſt any Veniſon, after you have waſht it, & clenſed all the blood from it, you ſhall ſtick it with cloves all over on the outſide; & if it be leane, you ſhall lard it either with mutton lard, or pork lard: but mutton is the beſt: then ſpit it and roſt it by a ſoaking fire, then take vinegar, bread crums, and ſome of the gravy which comes from the veniſon, and boyl them well in a diſh: then ſeaſon it with ſugar, cinnamon, ginger and ſal, and ſerve the veniſon forth upon the ſawce when it is roſted enou h.

To roaſt Veniſon.

If you will Roaſt a piece of freſh Sturgeon, which is a da nty diſh, you ſhall ſtop it with Cloves, then ſpit it, and let it Roaſt at great leiſure, plying it continually with baſting, which will

take away the hardneſs: then when it is enough you ſhall dr it and ſerve it upon Veniſon ſawce, with ſalt only thrown upon it.

The roaſting of all ſorts of meats differeth nothing but in the fire, ſpeed and leiſure as is aforeſaid; except theſe compound diſhes, of which I have given you ſufficient preſidents, and by them you may perform any work whatſoever: but for the ordering, preparing, and truſſing your meat for the ſpit or Table, in that there is much difference: for in all joynts of meat except a ſhoulder of Mutton, you ſhall cruſh and break the joynts well; from Pigs and Rabbets you ſhall cut off the feet before you ſpit them, and the heads when you ſerve them to the Table; and the Pig you ſhall chine and divide into two parts: Capons, Pheaſants, Chickens, and Turkies you ſhall roaſt with the Pinions folded up, and the legs extended: Hens, Stock-doves, and Houſe-doves, you ſhall Roſte with the Pinions folded, and the legs cut off by the knees and thruſt into the bodies: Quails, Partridges, and all ſorts of ſmall Birds ſhall have their Pinions cut away, and the legs extended: all ſorts of Water fowl ſhall have their Pinions cut away, and their legs turned backwards: Wood-cocks, Snipes and Stint ſhall be Roaſted with their Heads and Necks on, and their legs thruſt into their bodies; and ſhoulders, and Bitturns ſhall have no necks but their heads only.

To roaſt a Cows Udder. Take a Cows Udder, and firſt boyl it well: then ſtick it thick all over with Cloves: then when it is cold ſpit it, and lay it on the fire, and apply it very well with baſting of ſweet butter, and when it is ſufficiently roſted and brown, then dredge it, and draw it from the fire, take vinegar and butter, and put it on a chafing-diſh and coals; and boyl it with White bread crum, till it be thick: then put to it good ſtore of Sugar and Cinnamon, and putting it into a clean diſh, lay the Cows Udder therein, and trim the ſides of the diſh with Sugar, and ſo ſerve it up.

To Rooſt a Fillet of Veal. Take an excellent good leg of Veal, and cut the thick part thereof, a handfull and more from the Knuckle: then take the thick part (which is the fillet) and farce it in every part all over with Strawberry leaves, Sorrel, Spinage, Endive, and Suc-

Succory grossely chopt together, and good store of Onions, then lay it to the fire and roast it very sufficiently and brown, casting good store of Salt upon it, and basting it well with sweet butter: then take of the former herbs much finer chopt then they were for farcing, and put them into a Pipkin with Vinegar and clean washt Currants, and boyl them well together; then when the herbs are sufficiently boyled and soft, take the yelks of foure very hard boyled Eggs, and shred them very small, and put them into the Pipkin also with Sugar and Cinnamon and some of the gravy which drops from the Veal, and boyl it over again, and then put it into a clean dish, and the fillet being dredged and drawn, lay upon it and trim the side of the dish with Sugar, and so serve it up.

To make an excellent Sauce for a rost Capon, you shall take Onions, and having sliced and peeled them, boyl them in fair water with Pepper, Salt, and a few bread crums: then put unto it a spoonfull or two of claret Wine, the juyce of an Orange, and three or four slices of Lemmon peel: all these shred together, and so pour it upon the Capon being broke up.

To make a sawce for an old Hen or Pullet, take a good quantity of Beer and Salt, and mix them well together with a few fine bread crums, and boyl them on a chafing-dish and coals; then take the yelks of three or four hard Egges, and being shred small put it to the beer, and boyl it also; then the Hen being almost enough, take three or four spoonfulls of the gravy which comes from her, and put it in also, and boyl all together to an indifferent thickness: which done, suffer it to boyl no more, but only to keep it warm on the fire, and put into it the juyce of two or three Oranges, and the slices of Lemmon-peels shred small, and the slices of Oranges, having also the upper rind taken away: then the Hen being broke up, take the brains thereof, and shredding them small, put it into the sawce also, and stirring all well together, put it hot into a cleane warme dish, and lay the Henne (broke up) in the same.

The Sawce for Chickens is divers, according to mens tastes: for some will onely have Butter, Verjuyce, and a little

Parſly roſted in their bellies mixt together; others will have butter, verjuyce, and Sugar boyl'd together with toaſts of bread and others will have thick ſippets with the juyce of ſorrel and ſugar mixt together.

The beſt ſawce for a Pheſant is water and Onions ſlic't, Pepper and a little Salt mixt together, and but ſtewed upon the coals, & then poured upon the Pheſant or Partridge, being broken up, and ſome will put thereto the juyce or ſlices of an Orange or Lemon, or both: but it is according to taſte, and indeed more proper for Pheſant then Partridge.

Sauce for a Quail, Raile, or any fat big bird, is Claret wine and ſalt mixt together with the gravy of the bird, and a few fine bread crums well boyled together, and either a Sage leaf, or Bay leaf cruſht amongſt it, according to mens taſtes.

Sauce for Pidgeons. The beſt ſauce for Pidgeons, Stockdoves, or ſuch like, is Vinegar and butter melted together, and parſly roſted in their bellies; or Vine leaves roſted and mixed well together.

A general ſauce for wild fowl. The moſt generall ſauce for ordinary wild fowl roſted, as Ducks, Mallard, Widgeon, Teal, Snipe, Sheldrake, Plovers, Puets, Guls, and ſuch like, is only Muſtard and Vinegar, or Muſtard and Verjuyce mixt together; or elſe an Onion, Water, and Pepper, and ſome (eſpecially in the Court) uſe only butter melted, and not with any thing elſe.

Sauce for green Geeſe. The beſt ſauce for green Geeſe is the juyce of Sorrel and Sugar mixt together with a few ſcalded Feberries, and ſerved up on ſippets; or elſe the belly of the green Gooſe fild with Feberries and ſo roſted; and then the ſame mixt with Verjuyce, Butter, Sugar and Cinnamon and ſo ſerved up on ſippets.

Sauce for ſtubble Geeſe. The Sawce for a ſtubble Gooſe is divers, according to mens minds, for ſome will take the pap of roſted Apples, and mixing it with vinegar, boyl them together on the fire with ſome of the gravy of the Gooſe, and a few barberries and bread crums, and when it is boyled to a good thickneſs, ſeaſon it with Sugar and a little Cinnamon, and ſo ſerve it up: ſome will add a little Muſtard and Onions unto it, and ſome will not roſt the apples, but pare them and ſlice them, and that is the neerer way, but not the better. Others will fill the belly of the Gooſe full of Onions ſhred, and Oatmeal groats, and being

ing roasted enough, mix it with the gravie of the Goose, and sweet hearbs well boyled together, and seasoned with a little Verjuyce.

To make a *Gallantine*, or sauce for a Swan, Bittern, Hern, Crane, or any large Foul, take the blood of the same Fowl, and being stirred well, boyl it on the fire, then when it comes to be thick put unto it Vinegar a good quantity, with a few fine white bread crums, and so boyl it over again; then being come to a good thickness, season it with Sugar and Cinnamon, so as it may taste pretty and sharp upon the Cinnamon, and then serve it up in sawcers as you do Mustard, for this is called a *Chaudet* or *Gallantine*, and is a sawce almost for any Fowl whatsoever. A Gallantine Sawce for a Swan.

To make sawce for a Pig, some take Sage and roast it in the belly of the Pig; then boyling Verjuyce, Butter, and Currants together, take and chop the sage small and mixing the brains of the Pig with it, put all together and so serve it up. A Sawce for a Pig.

To make sawce for a loyn of Veal, take all kind of sweet Pot herbs, and chopping them very small with the yelks of two or three Eggs, boyl them in Vinegar and Butter, with a few bread crums, and good store of sugar; then season it with Sugar and Cinnamon, and a Clove or two crusht, and so powre it upon the Veal, with the slices of Oranges and Lemons about the Dish. A sawce for Veal.

Take Oranges and slice them thin, and put unto them White wine and Rose-water, the powder of Mace, Ginger, and Sugar, and set the same upon a Chafing dish of coals, and when it is half boyled, put to it a good lump of butter, and then lay good store of sippets of fine white bread therein, and so serve your Chickens upon them, and trim the sides of the dish with Sugar. Additions unto Sawces.

Take fair water, and set it over the fire: then slice good store of Onions, and put into it, and also Pepper and salt and good store of the Gravy that comes from the Turky, and boyl them very well together: then put to it a few fine crums of grated bread to thicken it, a very little sugar, and some Vinegar, and so serve it up with the Turkey: or otherwise, take grated White bread and boyl it in white Wine till it be as thick as a *Gallantine*; in boyling put in good store of su- Sawce for a Turky.

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gar, and Cinamon, and then with a little Turnsole make it of a high murrey colour, and so serve it in saucers with the Turkey, in manner of a Gallantine.

The best Gallantine.

Take the blood of a Swan, or any other great fowle, and put it into a dish, then take stewed Prunes, and put them into a strainer, and strain them into the blood; then set it on a chafing-dish and coales, and let it boyl; then stir it till it come to be thick, and season it very well with sugar and cinamon, and so serve it in Saucers with the fowl: but this sauce must be served cold.

Sawce for a Mallard.

Take good store of Onions, peel them and slice them, and put them into Vinegar and boyl them very well till they be tender; then put into it a good lump of sweet butter, and season it well with Sugar and Cinamon, and so serve it up with the fowl.

Of Carbonadoes.

Charbonadoes, or carbonadoes which is meat broyled upon the coals (and the invention thereof was first brought out of *France* as appears by the name) are of divers kinds according to mens pleasures: for there is no meat either boyled or rosted whatsoever, but may afterwards be broyled if the master thereof be disposed; yet the general dishes which for the most part are to be carbonadoed, are, a breast of Mutton half boyled; a shoulder of mutton half rosted, the legs, wings, and carkasses of Capon, Turkey, Goose, or any other fowl whatsoever, especially Land fowl.

What is to be carbonadoed.

And lastly, the uttermost thick skin which covereth the ribbs of beef, and is called (being boyled,) the Inns of Court-Goose, and is indeed a dish used most for wantonness, sometimes to please the appetite; to which may also be added the broyling of Pigs heads, or the brains of any fowl whatsoever after it is rosted and drest.

The manner of Carbonadoing.

Now for the manner of Carbonadoing, it is in this sort; you shall first take the meat you must Carbonado, and scotch it both above and below; then sprinkle good store of salt upon it, and baste it all over with sweet butter melted; which done, take your Broyling-iron, I do not mean a Grid-iron (though it be much used for this purpose) because the smoak of the coals, occasioned by the dropping of the meat, will ascend about it, and

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make it ſtink: but a Plate iron made with hooks and pricks, on which you may hang the meat, and ſet it cloſe before the fire, and ſo the Plate heating the meat behind, as the fire doth before, it will both the ſooner and with more neatneſs be ready: then having turned it, and baſted it till it be very brown, dredg it, and ſerve it up with vinegar and butter.

Touching the toaſting of Mutton, Veniſon, or any joynt of Meat, which is the moſt excellenteſt of all Carbanadoes; you ſhall take the fatteſt and largeſt that can poſſibly be got (*for lean meat is loſs of labour, and little meat not worth your time*:) and having ſcotcht it and caſt ſalt upon it, you ſhall ſet it on a ſtrong fork, with a dripping pan underneath it, before the face of a quick fire, yet ſo far off, that it may by no means ſcorch, but toaſt at leiſure; then with that which falls from it, and with no other baſting, ſee that you baſte it continually, turning it ever and anon many times and ſo oft, that it may ſoak and brown at great leiſure; and as oft as you baſte it, ſo oft ſprinkle Salt upon it; and as you ſee it toaſt, ſcotch it deeper and deeper, eſpecially in the thickeſt and moſt fleſhy parts where the blood moſt reſteth; and when you ſee that no more blood droppeth from it, but the gravy is cleer and white, then you ſhall ſerve it up either with Veniſon ſawce, with Vinegar, Pepper, and Sugar, Cinnamon, and the juyce of an Orange mixt together, and warmed with ſome of the gravy. Of the toſting of Mutton.

Take Mutton or Lamb that hath been either roſted, or but parboyl'd, and with your knife ſcotch it many ways, then lay it in a deep diſh, and put to it a pint of white Wine, and a little whole Mace, a little ſlic't Nutmeg, and ſome Sugar, with a lump of ſweet butter, and ſtew it ſo till it be very tender; then take it forth, and brown it on the Grid-iron, and then laying ſippets in the former broth, ſerve it up. Addi... unto ... does. A Raſher of Mutton or Lamb.

Take any Tongue, whether of Beef, Mutton, Calves; Red Deer or Fallow, and being well boyled peel them, cleave them, and ſcotch them many wayes; then take three or four egges broken; ſome Sugar, Cinnamon, and Nutmeg, and having beaten it well together, put to it a Lemmon cut in thinne ſlices, and another clean peel'd, and cut into little four ſquare bits, and then take the tongue, How to Carbonado Tongues.

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and lay it in: and then having melted good store of butter in a frying pan, put the tongue and the rest therein, and so frye it brown, and then dish it, and scrape sugar upon it, and serve it up.

Additions.

For dressing Fish.

How to souse any fresh fish.

Take any fresh fish whatsoever (as Pike, Bream, Carpe, Barbel, Cheam, and such like,) and draw it, but scale it not; then take out the Liver and the refuse, and having opened it, wash it: then take a pottle of fair water, a pretty quantity of white Wine, good store of salt, and some vinegar, with a little bunch of sweet herbs, and set it on the fire: as soone as it begins to boyl, put in your fish, and having boyled a little, take it up into a fair vessel, then put into the liquor some grosse Pepper and Ginger, and when it is boyled well together with more salt, set it by to cool, and then put your Fish into it, and when you serve it up, lay Fennel thereupon.

How to boyl small Fish.

To boyl small Fish, as Roches, Dace, Gudgeons, or Flounders, boyl White wine and water together with a bunche of choyce Herbs, and a little whole Mace, when all is boyl'd well together, put in your fish and scum it well: then put in the soal of a *Manchet*, a good quantity of sweet butter, and season it with Pepper and Verjuyce, and so serve it in upon sippets, and adorn the sides of the dish with Sugar.

To boyl a Gurnet or Roch.

First draw your Fish, and either splint it open in the backe or joynt it in the back, and trusse it round; then wash it clean, and boyl it in Water and Salt, with a bunch of sweet Herbes then take it up into a large dish, and pour unto it Verjuyce Nutmeg, Butter, and Pepper, and letting it stew a little, thicken it with the yelks of eggs: then hot remove it into another dish, and garnish it with slices of Oranges and Lemons, Barberies, Prunes, and Sugar and so serve it up.

After you have drawn, washt and scaled a fair large Carp, season it with Pepper, Salt, and Nutmeg, and then put it into a Coffin with good store of sweet butter, and then cast on Raisins of the Sun, the juyce of Lemons, and some slices of Orange-pils, and then sprinkling on a little Vinegar, close it up and bake it.

First let your *Tench* blood in the tayle, then scoure it, wash it

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it, and ſcall'd it, then having dryed it, take the fine crummes of Bread, ſweet Cream, the yelks of Egges, Currants clean waſht, a few ſweet hearbs chopt ſmall, ſeaſon it with Nutmeg and Pepper, and make it into a ſtiffe paſte, and put it into the belly of the Tench, then ſeaſon the Fiſh on the out ſide with Pepper, Salt and Nutmeg; and ſo put it into a deep Coffin with ſweet butter, and ſo cloſe up the Pye and bake it; then when it is enough draw it, and open it, and put into it a good piece of preſerved Orange minc'd: then take Vinegar, Nutmeg, Butter, Sugar, and the yelk of a new laid Egge, and boyl it on a Chafing-diſh and coals, alwayes ſtirring it to keep it from curding; then poar it into the pye, ſhake it well, and ſo ſerve it up.

How to ſtew a Trout.

Take a large Trout fair trim'd, and waſh it, and put it into a deep pewter diſh, then take halfe a pint of ſweet Wine, with a lump of butter, and a little whole mace, Parſley, Savory, & Thyme, mince them all ſmall, and put them into the Trouts Belly, and ſo let it ſtew a quarter of an houre, then mince the yelk of a hard Egge, and ſtrow it on the Trout, and laying the hearbs about it, and ſcraping on Sugar, ſerve it up.

How to bake Eeles.

After you have drawn your Eeles, chop them into ſmall pieces of three or four inches, and ſeaſon them with Pepper, Salt, and Ginger, and ſo put them into a Coffin with a good lump of Butter, great Raiſins, Onions ſmall chopt, and ſo cloſe it, bake and ſerve it up.

The paſtry and baked Meats.

Next to theſe already rehearſed, our Engliſh Houſe-wife muſt be skilful in Paſtry, and know how and in what manner to bake all ſorts of meat, and what Paſte is fit for every meat, and how to handle and compound ſuch Paſtes. As for example, Red Deer, Veniſon, Wild Boar, Gammons of Bacon, Swans, Elkes, Porpus, and ſuch like ſtanding diſhes, which muſt be kept long, would be bak't in a moyſt, thick, tough, courſe, and long laſting cruſt, and therefore of all other, your Rye paſte is beſt for that purpoſe; your Turkey, Capon, Pheaſant, Partridge, Veal, Peacocks, Lamb, and all ſorts of Water-Fowl, which are to come to the Table more than once, (yet not many dayes) would be bak't in a good white cruſt, ſomewhat thick; therefore your Wheat is

fit for them; your Chickens, Calves-feet, Olives, Potatoes, Quinces, Fallow Deer, and such like; which are most commonly eaten hot, would be in the finest, shortest, and thinnest crust, therefore your fine Wheat-flower, which is a little baked in the Oven, before it be kneaded, is the best for that purpose.

Of the mixture of Paste.

To speak then of the mixture and kneading of Pastes, you shall understand, that your Rye-paste would be kneaded onely with hot water, and a little Butter, or sweet Seam, and Rye-flower very finely sifted; and it would be made tough and stiffe, that it may stand well in the rising, for the Coffin thereof must ever be very deep; your course Wheat-crust should be kneaded with hot water, or Mutton broth, and good store of Butter, and the paste made stiffe and tough, because that Coffin must be deep also: your fine Wheat crust must be kneaded with as much butter as water, and the paste made reasonable light and gentle, into which you must put three or four eggs or more, according to the quantity you blend together, for they will give it a sufficient stiffening.

Of Puffe paste.

Now for the making of puff-paste of the best kind, you shall take the finest Wheat flower after it hath been a little bak't in a pot in the Oven, and blend it well with eggs, whites and yelks all together, and after the paste is well kneaded, roul out a part thereof as thin as you please, and then spread cold sweet butter over the same; then upon the same butter roul another leaf of the paste as before, and spread it with butter also; and thus roul leaf upon leaf with butter between, till it be as thick as you think good: and with it either cover any bak't meat, or make paste for Venison, Florentine, Tart, or what dish else you please, and so bake it. There be some that to this paste use Sugar, but it is certain, it will hinder the rising thereof, and therefore, when your puff-paste is bak't, you shall dissolve Sugar into Rose-water, and drop it into the paste as much as it will by any means receive, and then set it a little while in the Oven after, and it will be sweet enough.

Of baking red Deer or Fallow, or any thing to keep cold.

When you bake red Deer, you shall first parboyl it, and take out the bones, then you shall, if it be lean, lard it; if fat, save that charge; then put it into a press to squeeze out the blood; then

then for a night lay it in a meat ſauce made of Vinegar, ſmall drink and ſalt; and then taking it forth, ſeaſon it well with Pepper finely beaten, and ſalt well mixt together, and ſee that you lay good ſtore thereof, both upon and in every open and hollow place of the Veniſon, but by no means cut any ſlaſhes to put in the Pepper, for it will of it ſelf ſink faſt enough into the fleſh and be more pleaſant in the eating. Then having raiſed the Coffin, lay in the bottom a thick courſe of butter, then lay the fleſh thereon, and cover it all over with butter, and ſo bake it as much as if you did bake brown bread, then when you draw it, melt more butter with three or four ſpoonfuls of Vinegar, and twice ſo much Claret Wine, and at a vent hole on the top of the lid, pour in the ſame till it can receive no more, and ſo let it ſtand and cool; and in this ſort you may bake Fallow Deer, or Swan, or whatſoever elſe you pleaſe to keep cold, the meat ſauce onely being left out, which is onely proper to Red Deer. And if to your meat ſauce you add a little Turnſole, and therein ſteep Beef and Ramme Mutton: you may alſo in the ſame manner take the firſt for Red Deer Veniſon, and the later for Fallow, and a very good judgment ſhall not be able to ſay otherwiſe, then that it is of it ſelf perfect Veniſon both in Taſte, Colour, and the manner of cutting.

To bake Beef or Mutton for Veniſon.

To bake an excellent Cuſtard or Dowſet, you ſhall take good ſtore of eggs, and putting away one quarter of the whites, beat them exceeding well in a baſon, and then mixe with them the ſweeteſt and thickeſt Cream you can get; for if it be any thing thin, the Cuſtard will be wheyiſh: then ſeaſon it with Salt, Sugar, Cinnamon, Cloves, Mace, and a little Nutmeg; which done, raiſe your coffins of good tough Wheat paſte, being the ſecond ſort before ſpoken of, and if you pleaſe raiſe it in pretty works or angular forms, which you may do by fixing the upper part of the cruſt to the nether with the yelks of eggs; then when the coffins are ready, ſtrew the bottoms over a good thickneſſe with Currants and Sugar, then ſet them into the Oven, and fill them up with the Confection before blended, and ſo drawing them, adorn all the Tops with Carraway Comfets, and ſlices of Dates prickt right up, and ſo ſerve them up to the Table. To pre-

To bake a Cuſtard or Dowſet.

vent the wheyishness of the Custard, dissolve into the first confection a little Ising-glass, and all will be firm.

To bake an Olave-Pye.

To make an excellent Olave Pye; take sweet herbs, as Violet leaves, Strawberry leaves, Spinage, Succory, Endive, Thyme and Sorrel, and chop them as small as may be, and if there be a Scallion or two amongst them, it will give the better taste; then take the yelks of hard Eggs, with Currants, Cinnamon, Cloves, and Mace, and chop them among the herbs also; then having cut out long Olaves of a leg of Veal, roul up more than three parts of the herbs so mixed within the Olaves, together with a good deal of sweet butter; then having raised your crust of the finest and best paste, strew in the bottom the remainder of the herbs, with a few great Raisins, having the stones pickt out, then put in the Olaves, and cover them with great Raisins, and a few Prunes: then over all lay good store of Butter, and so bake them; then being sufficiently bak't, take Claret Wine, Sugar, Cinnamon, and two or three spoonfuls of Wine Vinegar, and boyl them together, and then drawing the Pye, at a vent in the top of the lid put in the same, and then set it into the Oven again a little space, and so serve it forth.

To bake a Marrow-bone Pye.

To bake the best Marrow-bone-Pye, after you have mixt the crusts of the best sort of pasts, and raised the coffin in such a manner as you please; you shall first in the bottome thereof, lay a course of marrow of Beef, mixt with Currants; then upon it a lay of the soals of Artichokes, after they have been boyled, and are divided from the Thistle; then cover them over with Marrow, Currants, and great Raisins, the stones pickt out; then lay a course of Potatoes cut in thick slices, after they have been boyled soft, and are clean pill'd; then cover them with Marrow, Currants, great Raisins, Sugar, and Cinnamon; then lay a layer of candied Eringo roots mixt very thick with the slices of Dates; then cover it with Marrow, Currants, great Raisins, Sugar, Cinnamon and Dates, with a few Damask Prunes, and so bake it: and after it is bak't, pour into it, as long as it will receive it, White Wine, Rose-water, Sugar, Cinnamon, and Vinegar mixt together, and candy all the coyer with Rose-water

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and Sugar only, and so set it into the Oven a little, and serve it forth.

To bake a Chicken Pye, after you have trust your Chickens, then broken their leggs and brest bones, and raised your crust of the best paste, you shall lay them in the coffin close together, with their bodies full of butter; then lay upon them, and underneath them Currants, great Raisins, Prunes, Cinnamon, Sugar, whole Mace, and Salt; then cover all with great store of Butter, and so bake it: after pour into it the same liquor you did in your Marrow-bone-Pye, with yelks of two or three Eggs beaten amongst it, and so serve it forth. To bake a Chicken pye.

To make good Red Deer Venison of Hares; take a Hare or two or three, as you can or please, and pick all the flesh from the bones; then put it into a Mortar either of wood or stone, and with a wooden pestle let a strong person beat it exceedingly, and ever as it is beaten, let one sprinkle in some Vinegar, and some Salt: then when it is sufficiently beaten, take it out of the Mortar, and put it into boyling water, and parboyl it; when it is parboyl'd, take it and lay it on a Table in a round lump, and lay a board over it, and with weights press it as hard as may be; then the water being prest out of it, season it well with Pepper and Salt; then lard it with the fat of Bacon so thick as may be, then bake it as you bake other Red Deer, which is formerly declared. Additions to the pastry for Venison of Hares.

Take a Hare and pick of all the flesh from the bones, and only reserve the head; then parboyl it well; which done, take it out and let it cool; as soon as it is cold, take at least a pound and half of Raisins of the Sun, and take out the stones, then mixe them with a good quantity of Mutton suet, and with a sharp shredding-Knife shred it as small as you would do for a Chevet; then put to it Currants, and whole Raisins, Cloves and Mace, Cinnamon and Salt; then having raised the Coffin long-wise to the proportion of a Hare, first lay in the head, and then the aforesaid meat, and lay the meat in the true proportion of a Hare, with neck, shoulders and leggs; and then cover the coffin, and bake it as other bak't meats of that nature. To bake a Hare-Pye.

Take

A Gammon of Bacon Pie.

Take a Gammon of Bacon, and onely wash it clean, and then boyl it on a soft gentle fire, till it be boyl'd as tender as is possible, ever and anon fleeting it clean, that by all means it may boyl white: then take off the sword, and farse it very well with all manner of sweet and pleasant farsing herbs, then strew store of Pepper over it, and prick it thick with Cloves; then lay it into a coffin made of the same proportion, and lay good store of Butter round about it, and upon it, and strew Pepper upon the Butter, that as it melts, the Pepper may fall upon the Bacon; then cover it, and make the proportion of a Pigs Head in paste upon it, and then bake it as you bake red Deer, or things of the like nature, only the Paste would be of Wheat-meal.

A Herring Pie.

Take white pickled Herrings of one Nights watering, and boyl them a little, then take off the skin, and take only the backs of them, and pick the Fish clean from the bones; then take good store of Raisins of the Sun, and stone them; and put them to the Fish; then take a Warden or two, and pare it, and slice it in small slices from the core, and put it likewise to the fish; then with a very sharp shredding Knife shred all as small and fine as may be: then put to it good store of Currants, Sugar, Cinnamon, slic't Dates, and so put it into the coffin, with good store of sweet Butter, and so cover it, and leave onely a round vent-hole on the top of the lid, and so bake it like Pies of that nature. When it is sufficiently bak't, draw it out, and take Claret Wine, and a little Verjuyce, Sugar, Cinnamon, and sweet Butter, and boyl them together: then put it in at the vent-hole, and shake the Pye a little, and put it again into the Oven for a little space, and so serve it up, the lid being candied over with Sugar, and the sides of the dish trimmed with Sugar.

A Ling Pie.

Take the jole of the best Ling that is not much watered, and is well sodden and cold; but whilst it is hot, take off the skin, and pare it clean underneath, and pick out the bones clean from the fish; then cut it into gross bits, and let it lye; then take the yelks of a dozen Eggs boyl'd exceeding hard, and put them to the Fish and shred all together as small as is possible, then take all manner of the best and finest pot-herbs, and chop them wonderful

derful ſmall, and mixe them alſo with the Fiſh, then ſeaſon it with Pepper, Cloves and Mace, and ſo lay it in a coffin with great ſtore of ſweet butter, ſo as it may ſwim therein, and then cover it, and leave a vent-hole open in the top, and when it is baked, draw it, and take Verjuyce, Sugar, Cinnamon, and Butter, and boyl them together; and firſt with a feather anoint all the lid over with that liquor, and then ſcrape good ſtore of Sugar upon it; then pour the reſt of the liquor in at the vent-hole, and then ſet it into the Oven again for a very little ſpace, and then ſerve it up as Pyes of the ſame nature, and both theſe Pyes of Fiſh before rehearſed, are extraordinary and ſpeciall Lenten diſhes.

Take a pinte of the ſweeteſt and thickeſt Cream that can be gotten, and ſet it on the fire in a very clean ſcoured Skillet, and put into it Sugar, Cinnamon, and a Nutmeg cut into four quarters, and ſo boyl it well; then take the yelks of four Eggs, and take off the ſlimes, and beat them well with a little ſweet Cream, then take the four quarters of the Nutmeg out of the Cream, then put in the Eggs, and ſtirre it exceedingly till it be thick: then take a fine Manchet, and cut it into thinne ſhivers, as much as will cover a diſh bottom, and holding it in your hand, pour half the Creame into the diſh: then lay your bread over it, and cover the bread with the reſt of the Cream, and ſo let it ſtand till it be cold: then ſtrew it over with Caraway Comfets, and prick up ſome Cinnamon Comfets, and ſome ſlic't Dates; or for want thereof, ſcrape all over it ſome Sugar, and trim the ſides of the diſh with Sugar, and ſo ſerve it up.

Take a pinte of the beſt and thickeſt Cream, and ſet it on the fire in a clean Skillet, and put into it Sugar, Cinnamon, and a Nutmeg cut into four quarters, and ſo boyl it well, then put it into the diſh you intend to ſerve it in, and let it ſtand to cool till it be more than luke-warm; then put in a ſpoonful of the beſt earning, and ſtir it well about, and ſo let it ſtand till it be cold; and then ſtrew Sugar upon it, and ſo ſerve it up: and this you may ſerve either in diſh, glaſs, or other plate.

Take Calves feet well boyl'd, and pick all the meat from the bones; then being cold, ſhred it as ſmall as you can; then ſea- A Calves-foot Pye.

ſon

son it with Cloves and Mace, and put in good store of Currants, Raisins and Prunes, then put it into the coffin with good store of sweet Butter: then break in whole sticks of Cinnamon, and a Nutmeg slic't into four quarters, and season it before with Salt; then close up the coffin, and onely leave a vent-hole; When it is bak't, draw it, and at the vent-hole put in the same liquor you put in the Ling-pye, and trim the lid after the same manner, and so serve it up.

Oyster Pye. Take of the greatest Oysters drawn from the shells, and parboyl them in Verjuyce; then put them into a Cullender, and let all the moysture run from them, till they be as dry as possible, then raise up the coffin of the Pye, and lay them in; then put to them good store of Currants, and fine powdred Sugar, with whole Mace, whole Cloves, whole Cinnamon, and Nutmeg slic'd, Dates cut, and good store of sweet Butter; then cover it, and onely leave a vent-hole: when it is bak't, then draw it, and take White Wine, and white Wine Vinegar, Sugar, Cinnamon, and sweet Butter, and melt it together: then first trim the lid therewith, and candy it with Sugar; then pour the rest in at the vent hole, and shake it well, and so set it into the Oven again for a little space, and so serve it up, the dish edges trim'd with Sugar. Now some use to put to this Pye Onions sliced and shred, but that is referred to discretion, and to the pleasure of the Taste.

To recover Venison that is tainted. Take strong Ale, and put to it Wine Vinegar as much as will make it sharp, then set it on the fire, and boyl it well, and scum it, and make of it a strong brine with Bay-salt or other Salt; then take it off, and let it stand till it be cold, then put your Venison into it, and let it lye in it full twelve hours: then take it out from that meer sawce, and presse it well, then parboyl it, and season it with Pepper and Salt, and bake it, as hath been before shewed in this Chapter.

A chewet Pye. Take the brawns and the wings of Capons and Chickens after they have been roasted, and pull away the skin; then shred them with Mutton-suet very small; then season it with Cloves, Mace, Cinnamon, Sugar, and Salt: then put to Raisins of the Sun, and Currants, and slic'd Dates, and Orange-pills, and being well mixt together, put it into small coffins made for

for the purpose, and strew on the top of them good store of Carraway Comfets: then cover them, and bake them with a gentle heat: and these Chewets you may also make of roasted Veal, seasoned as before shewed, and of all parts the loyn is the best.

A minc'd pie.

Take a Legge of Mutton, and cut the best of the flesh from the bone, and parboyl it well: then put to it three pound of the best Mutton suet, and shred it very small; then spread it abroad, and season it with Salt, Cloves, and Mace: then put in good store of Currants, great Raisins and Prunes clean washed and picked, a few Dates sliced, and some Orange-pills sliced; then being all well mixt together, put it into a coffin, or into divers coffins, and so bake them: and when they are served up, open the lids, and strew store of Sugar on the top of the meat, and upon the lid. And in this sort, you may also bake Beef or Veal, only the Beef would not be parboyl'd, and the Veal will ask a double quantity of Suet.

A Pippin pie.

Take the faireſt and best Pippins, and pare them, and make a hole in the top of them; then prick in each hole a Clove or two, then put them into the coffin, then break in whole sticks of Cinnamon, and slices of Orange-pills, and Dates, and on the top of every Pippin, a little piece of sweet Butter; then fill the coffin, and cover the Pippins over with Sugar: then close up the Pye, and bake it, as you bake Pyes of the like nature: and when it is bak'd, anoint the lid over with store of sweet Butter, and then strew Sugar upon it a good thickness, and set into the Oven again for a little space, as while the meat is in dishing up, and then serve it.

A Warden pie.

Take of the faireſt and best Wardens, and pare them, and take out the hard cores on the top, and cut the sharp ends at the bottom flat; then boyl them in white Wine and Sugar, untill the syrup grow thick: then take the Wardens from the syrup in a clean dish, and let them cool, then set them into the coffin, and prick Cloves in the tops, with whole sticks of Cinamon, and great store of Sugar as for Pippins: then cover it, and only reserve a vent-hole, so set it in the Oven and bake it; when it is bak'd, draw it forth, and take the first syrup in

which the Wardens were boyld, and taste it, and if it be not sweet enough, then put in more Sugar, and some Rose-water, and boyl it again a little: then pour it in at the vent-hole, and shake the Pye well: then take sweet Butter, and Rose-water melted, and with it anoint the pye-lid all over, and then strew on it store of Sugar, and so set it into the Oven again a little space, and then serve it up: and in this manner you may also bake Quinces.

To preserve Quinces to bake all the year.

Take the best and sweetest Wort, and put to it good store of Sugar: then pare and cover the Quinces clean, and put them therein, and boyl them till they grow tender: then take out the Quinces and let them cool, and let the pickle in which they were boyled stand to coole also: then straine it thorow a raunge or sieve, then put the Quinces into a sweet earthen pot: then pour the pickle or syrup unto them, so as all the Quinces may be quite covered all over: then stop up the pot close, and set it in a dry place, and once in six or seven weeks look upon it; and if you see it shrink, or do begin to hoar or mould, then pour out the pickle or syrup, and renewing it, boyl it over again, and as before put it to the Quinces being cold, and thus you may preserve them for the use of baking, or otherwise, all the year.

A Pippin Tart.

Take Pippins of the faireſt, and pare them, and then divide them just in halfes, and take out the cores clean: then having rould the coffin flat, and raised up a small verge: of an inch, or more high, lay in the Pippins with the hollow side downward, as close one to another as may be: then lay here and there a Clove, and here and there a whole stick of Cinamon, and a little bit of Butter: then cover all clean over with Sugar, and so cover the coffin, and bake it according to the manner of Tarts, and when it is bak't, then draw it out, and having boyled Butter and Rose-water together, anoint all the lid over therewith, and then scrape or strew on it good store of Sugar, and so set it in the oven again, and after serve it up.

A Codlin tart

Take green Apples from the Tree, and coddle them in scalding water without breaking: then pill the thin skin from them and so divide them in halfs, and cut out the cores, and so lay

lay them into the coffin; and do in every thing as you did in the Pippin Tart; and before you cover it, when the Sugar is caſt in, ſee you ſprinkle upon it good ſtore of Roſe-water, then cloſe it, and do as before ſhewed.

Take Codlins as before ſaid, and pill them and divide them in halfes, and core them, and lay a lear thereof in the bottom of the pye: then ſcatter here and there a clove, and here and there a piece of whole Cinamon, then cover them all over with Sugar, then lay another lear of Codlins, and do as before ſaid, and ſo another, till the coffin be all filled; then cover all with Sugar, and here and there a Clove and a Cinamon-ſtick, and if you will a ſlic'd Orange pill and a Date; then cover it, and bake it as the Pies of that nature: When it is bak't, draw it out of the Oven, and take of the thickeſt and beſt Cream, with good ſtore of Sugar, and give it one boyl or two on the fire, then open the pye, and put the Cream therein, and maſh the Codlins all about; then cover it, and having trimm'd the lid, (as was before ſhewed in the like Pies and Tarts) ſet it into the Oven again for half an hour, and ſo ſerve it forth. A codlin pie.

Take the faireſt Cherries you can get, and pick them clean from leaves and ſtalks: then ſpread out your coffin as for your Pippin Tart, and cover the bottom with Sugar, then cover the Sugar all over with Cherries, then cover thoſe Cherries with Sugar, ſome ſticks of Cinamon, and here and there a Clove; then lay in more Cherries, and ſo more Sugar, Cinamon and Cloves, till the coffin be filled up: then cover it, and bake it in all points, as the codlin and pippin Tart, and ſo ſerve it: and in the ſame manner you may make Tarts of Gooſeberries, Strawberries, Rasberries, Bilberries, or any other Berry whatſoever. A cherry tart.

Take Rice that is clean picked, and boyl it in ſweet Cream, till it be very ſoft; then let it ſtand and cool, and put into it good ſtore of Cinamon and Sugar, and the yelks of a couple of Eggs and ſome Currants, ſtir and beat all well together, then having made the coffin in the manner before ſaid for other Tarts, put the Rice therein, and ſpread it all over the coffin: then break many little bits of ſweet Butter upon it all over, and ſcrape ſome Sugar over it alſo; then cover the Tart, and bake it, and trim it in all points as hath been before ſhewed, and ſo ſerve it up. A rice tart.

A Florentine. Take the Kidneys of Veal after it hath been well roasted, and is cold: then shred it fine as is possible; then take all sorts of sweet Pot-herbs, or farcing herbs, which have no bitter or strong tast, and chop them as small as may be, and putting the Veal into a large dish, put the herbs unto it, and good store of clean washt Currants, Sugar, Cinamon, the yelks of four eggs, a little sweet Cream warm'd, and the fine grated crums of a half-peny loaf, and salt, and mix all exceedingly together: then take a deep pewter dish, and in it lay your paste very thin rowled out, which paste you must mingle thus: Take of the fineſt Wheat-flower a quarr, and a quarter so much sugar, and a little Cinamon; then break into it a couple of eggs, then take sweet cream and butter melted on the fire, and with it knead the paste, and as was before said, having spread butter all about the dishes sides, then put in the Veal, and break pieces of sweet butter upon it, and scrape sugar over it; then rowl out another paste reasonable thick, and with it cover the dish all over, closing the two pastes with the beaten whites of eggs very fast together, then with your knife cut the lid into divers pretty works, according to your fancy, then set it in the Oven, and bake it with Pyes and Tarts of like nature: when it is bak'd, draw it and trim the lid with sugar, as hath been shewed in Tarts, and so serve it up with your second course.

A Prune Tart. Take of the faireſt damask Prunes you can get, and put them in a clean pipkin with fair Water, Sugar, unbruised Cinamon, and a branch or two of Rosemary, and if you have bread to bake, stew them in the Oven with your bread: if otherwise, stew them on the fire: when they are stewed, then bruise them all to mash in their syrup, and strain them into a clean dish; then boyl it over again with Sugar, Cinamon, and Rose-water, till it be as thick as marmelad: then set it to cool, then make a reasonable tough paste with fine flower, Water, and a little butter, and rowl it out very thin: then having patterns of paper cut into divers proportions, as Beasts, Birds, Arms, Knots, Flowers and such like, Lay the patterns on the paste, and so cut them accordingly: then with your fingers pinch up the edges of the paste, and set the work in

good

good proportion; then prick it well all over for riſing, and ſet it on a clean ſheet of large paper, and ſo ſet it into the Oven, and bake it hard; then draw it and ſet it by to cool; and thus you may do by a whole Oven full at one time, as your occaſion of expence is: then againſt the time of ſervice comes, take of the confection of Prunes before rehearſed, and with your knife or a ſpoon, fill the coffin according to the thickneſs of the verge, then ſtrew it over with carraway comfets, and prick long comfets upright in it, and ſo taking the paper from the botom, ſerve it on a plate in a diſh or charger, according to the bigneſs of the Tart, and at the ſecond courſe; and this Tart carrieth the colour black.

Take Apples and pare them, and ſlice them thin from the core into a Pipkin with White-wine, good ſtore of Sugar, Cinamon, a few Saunders and Roſe-water, and ſo boyl it till it be thick: then cool it and ſtrain it, and beat it very well together with a ſpoon, then put it into the coffin as you did the Prune-Tart, and adorn it alſo in the ſame manner, and this Tart you may fill it thicker or thinner, as you pleaſe to raiſe the edge of the coffin, and it carrieth colour red. Apple-Tart.

Take good ſtore of Spinnage, and boyl it in a Pipkin with White-wine till it be very ſoft as pap: then take it and ſtrain it well into a pewter diſh, not leaving any part unſtrained: then put to it Roſe-water, great ſtore of Sugar and Cinamon, and boyl it till it be as thick as Marmalad, then let it cool, and after fill your coffin and adorn it, and ſerve it in all points as you did your Prune-Tart; and this carrieth the colour green. A Spinnage-Tart.

Take the yelks of eggs and break away the films, and beat them well with a little Cream, then take of the ſweeteſt and thickeſt cream that can be got, and ſet it on the fire in a clean skillet, and put into it Sugar, Cinamon, Roſe-water, and then boyl it well: when it is boyld, and ſtill boyling, ſtir it well, and as you ſtir it put in eggs, and ſo boyl it till it curdle: then take it from the fire and put it into a ſtrainer, and firſt let the thin whey run away into a by-diſh, then ſtrain A yellow Tart.

strain the rest very well, and beat it well with a spoon, and so put it into the Tart coffin, and adorn it as you do your Prune Tart, and so serve it, and this carrieth the colour yellow.

A white Tart. Take the whites of eggs and beat them with Rose-water, and a little sweet cream, then set on the fire good thick sweet cream, and put into it sugar, cinamon, rose-water, and boyl it well, and as it boyls stir it exceedingly, and in the stirring put in the whites of eggs, then boyl it till it curd, and after do in all things as you did to the yellow Tart; and this carryeth the colour white, and it is a very pure white, & therefore would be adorned with Red carraway Comfets, and as this, so with blaunched almonds like white Tarts, and full as pure. Now you may if you please, put all these several colours, and several stuffs into one Tart, as thus; If the Tart be in proportion of a beast, the body may be of one colour, the eyes of another, the teeth of another, the tallons of another: and of birds, the body of one colour, the eyes of another, the legs of another, and every feather in the wings of a several colour, according to fancy: and so likewise in Armes, the field one colour, the charge of another, according to the form of the Coat armour; as for Mantles, Trails, and devices about Arms, they may be set out with several colours of preserves, conserves, marmalads and good in cakes, and as you shall find occasion or invention; and so likewise of knots, one tail of one colour, and another of another, and so of as many as you please.

An herb Tart. Take Sorrel, Spinage, Parsly, and boyl them in water till they be very soft as pap, then take them up and press the water clean from them, then take good store of yelks of eggs boild very hard, and chopping them with the herbs exceeding small, then put in good store of Currants, Sugar, and Cinamon, and stir all well together; then put them into a deep Tart coffin with good store of sweet butter, and cover it and bake it like a Pippin Tart, and adorn the Lid after the baking in that manner also, and so serve it up.

To bake a pudding pye. Take a quart of the best Cream, and set it on the fire, and slice a loaf of the lightest white bread into thin slices, and put into it, and let it stand on the fire till the milk begin to rise; then

then take it off, and put it into a baſon, and let it ſtand till it be cold, then put in the yelks of four eggs, and two whites, good ſtore of Currants, Sugar, Cinamon, Cloves, Mace, and plenty of Sheeps Suet finely ſhred, and a good ſeaſon of Salt, then trim your pot very well round about with Butter, and ſo put in your pudding, and bake it ſufficiently, then when you ſerve it, ſtrew Sugar upon it.

A white-pot.

Take the beſt and ſweeteſt Cream; and boyl it with good ſtore of Sugar, and Cinamon, & a little Roſe-water, then take it from the fire and put it into clean pickt Rice, but not ſo much as to make it thick, and let it ſteep therein till it be cold, then put in the yelks of ſix eggs and two whites, Currants, Cinamon, Sugar, and Roſe-water, and Salt, then put it into a pan or pot as thin as it were a cuſtard; and ſo bake it, and ſerve it in the pot it is baked in, trimming the top with Sugar or Comfets.

Banqueting fruit and conceited diſhes.

There are a world of other bak't Meats and Pies, but for as much as whoſoever can do theſe, may do all the reſt, becauſe herein is contained all the art of ſeaſonings, I will trouble you with no further repetitions; but proceed to the manner of making Banqueting ſtuff, and conceited diſhes, with other pretty and curious ſecrets, neceſſary for the underſtanding of our Engliſh Houſewife: for albeit, they are not of general uſe, yet in their due times, they are ſo needful for adornation, that whoſoever is ignorant therein, is lame, and but the half part of a Houſe-wife.

To make paſt of Quinces.

To make paſt of Quinces, firſt boyl your Quinces whole, and when they are ſoft pare them, and cut the Quince from the core; then take the fineſt Sugar you can get, finely beaten or ſearſed; and put in a little Roſe-water, and boyl it together till it be ſtiff enough to mould, and when it is cold, then role it: and print it: a pound of Quinces will take a pound of Sugar, or near thereabouts.

To make thin Quince-cakes.

To make thin Quince-cakes, take your Quince when it is boyled ſoft as before ſaid, and dry it upon a pewter plate, with a ſoft heat, and be ever ſtirring of it with a ſlice till it be hard, then take ſearſed Sugar quantity for quantity, and ſtrew it into the Quince, as you beat it in a wooden or ſtone mortar: and ſo roul them thin and print them.

To

To preserve Quinces.

To preserve quinces, first pare your quinces, and take out the cores, and boyl the cores and parings altogether in fair water, and when they begin to be soft, take them out and strain your liquor, and put the weight of your Quinces in Sugar, and boyl the Quinces in the syrup till they be tender: then take them up and boyl the syrup till it be thick. If you will have your Quinces red, cover them in the boyling; and if you will have them white do not cover them.

To make Ipocras.

To make Ipocras, take a pottle of wine, two ounces of good Cinamon, half an ounce of ginger, nine cloves, and six pepper corns, and a nutmeg, and bruise them and put them into the wine with some Rosemary flowers, and so let them steep all night, and then put in Sugar a pound at least, and when it is well setled, let it run through a wollen bag made for that purpose: thus if your wine be claret, the Ipocras will be red; if white, then of that colour also.

To make Jelly.

To make the best jelly, take Calves feet and wash them, and scald off the hair as clean as you can get it: then split them and take out the fat and lay them in water and shift them, then bruise them in fair water untill it will jelly, which you shall know by now and then cooling a spoonful of the broth; when it will jelly, then strain it, and when it is cold, then put in a pint of Sack and whole Cinamon, and Sugar and a little Rose-water, and boil all well together again. Then beat the white of an Egg and put into it, and let it have one boyl more: then put in a branch of Rosemary into the bottom of your jelly bag, and let it run through once or twice, and if you will have it coloured, then put in a little Townsall. Also if you want Calves feet, you may make as good jelly if you take the like quantity of Ising-glass, and so use no Calves feet at all.

To make Leech.

To make the best Leech take Ising-glass, and lay it two hours in water, and shift it and boyl it in fair water, and let it cool, then take Almonds and lay them in cold water till they will blaunch; and then stamp them and put to new milk, and strain them and put in whole Mace and Ginger slic't, and boyl them till it tast well of the spice: then put in your Ising-glass and Sugar, and a little Rose-water, and let them all run through a strainer.

To make Ginger-bread.

Take Claret Wine, and colour it with Townsall, and put in Sugar

Sugar, and set it to the fire; then take wheat bread finely grated and sifted, and Licoras, Anniseeds, Ginger and Cinamon beaten very small and searsed; and put your bread and your spice together, and put them into the wine and boyl it, and stir it till it be thick, then mould it and print it at your pleasure, and let it stand neither too moist nor too warm.

Marmalade of Quinces, red.

To make red Marmalade of Quinces, take a pound of Quinces and cut them in half, and take out the cores, and pare them; then take a pound of Sugar, and a quart of fair water, and put them all into a pan, and let them boyl with a soft fire, and sometimes turn and keep them covered with a pewter dish, so that the steam or air may come a little out: the longer they are in boyling, the better colour they will have: and when they be soft take a Knife, and cut them cross upon the top it will make the syrup go through that they may be all of the like colour: then set a little of your syrup to cool, and when it beginneth to be thick, then break your Quinces with a slice or spoon, so small as you can in the pan, and then strew a little fine Sugar in your boxes bottom, and so put it up.

Marmalade white.

To make white Marmalade, you must in all points use your Quinces as before said; only you must take but a pint of water to a pound of Quinces, and a pound of Sugar, and boyl them as fast as you can, and cover them not at all.

To make Jumbals.

To make the best Jumbals, take the whites of three Eggs, and beat them well, and take off the froth; then take a little milk and a pound of fine wheat flowre and Sugar together finely sifted, and a few Anniseeds well rub'd and dryed, and then work all together as stiff as you can work it, and so make them in what forms you please, and bake them in a soft oven upon white papers.

To make Bisket-bread.

To make Bisket-bread, take a pound of fine flowre, and a pound of Sugar finely beaten and searsed, and mix them together, then take eight eggs, & put four yelks, & beat them very wel together; then strew in your flowr and sugar as you are beating of it, by a little at once, it will take very near an hours beating: then take half an ounce of Anniseeds and Coriander seeds, and let them be dryed and rub'd very clean, and put them in; then rub your Bisket-pans with cold sweet Butter as thin as you can, and so put it in, and bake it in an Oven: but if you would

have thin Cakes, then take fruit dishes, and rub them in like sort with Butter, and so bake your Cakes on them, and when they are almost baked, turn them, and thrust them down close with your hand. Some to this Bisket-bread will add a little Cream, and it is not amiss, but excellent good also.

To make finer Jumbals.

To make Jumbals more fine and curious than the former, and nearer to the taste of the Macaroon, take a pound of Sugar, beat it fine, then take as much fine wheat flowre, and mix them together, then take two whites and one yelk of an Egg, half a quarter of a pound of blanched Almonds: then beat them very fine altogether, with half a dish of sweet Butter, and a spoonful of Rose-water, and so work it with a little Cream till it come to a very stiff paste, then roul them forth as you please: and hereto you shall also if you please, add a few dryed Anniseeds finely rubbed, and strewed into the paste, and also Coriander seeds.

To make dry Sugar leach.

To make dry Sugar leach, blanch your Almonds, and beat them with a little Rose-water, and the white of one Egg, and you must beat it with a great deal of Sugar, and work it as you would work a piece of paste: then roul it, and print it as you did other things, only be sure to strew Sugar in the print for feat of cleaving too.

To make Leach Lombard.

To make Leach Lombard, take half a pound of blanched Almonds, two ounces of Cinamon beaten and searsed, half a pound of Sugar; then beat your Almonds; and strew in your Sugar and Cinamon till it come to a paste, then roul it, and print it, as afore-said.

To make fresh Cheese.

To make an excellent fresh Cheese, take a pottle of Milk as it comes from the Cow, and a pint of Cream: then take a spoonful of Runnet or Earning, and put it unto it, and let it stand two hours; then stir it up, and put it into a fine cloth, and let the Whey drain from it: then put it into a bowl, and take the yelk of an Egg, a spoonful of Rose-water, and bray them together with a very little Salt, with Sugar and Nutmegs, and when all these are brayed together, and searst, mix it with the curd, and then put it in the Cheese-fat with a very fine cloth.

How to make course Ginger-

To make course Ginger-bread, take a quart of Honey, and set it on the coals and refine it; then take a penny-worth of Ginger,

Ginger, as much Pepper, as much Licoras, & a quarter of a pound of Aniseeds, and a penny-worth of Saunders: all these must be beaten and searsed, and so put into the Hony; then put in a quarter of a pint of Claret wine, or old Ale: then take three penny manchets finely grated, and strew it amongst the rest, and stir it till it come to a stiff paste, and then make into Cakes, and dry them gently.

How to make Quince-cakes ordinary.

To make ordinary Quince-cakes, take a good piece of preserved Quince, and beat it in a mortar, & work it up into a very stiff paste with fine searst Sugar; then print it, and dry them gently.

How to make Cinamon sticks.

To make most artificial Cinamon sticks, take an ounce of Cinamon and pound it, and half a pound of Sugar: then take some gum Dragon, and put it in steep in Rose-water: then take thereof to the quantity of a Hazel-nut, and work it out and print it, and roul it in form of a Cinamon-stick.

How to make Cinamon water.

To make Cinamon-water, take a pottle of the best Ale and a pottle of Sack-lees, a pound of Cinamon sliced fine, and put them together; and set them stand two dayes; then distill them in a Limbeck or glass still.

To make Wormwood water.

To make Wormwood-water, take two gallons of good Ale, a pound of Anniseeds, half a pound of Licoras, and beat them very fine; & then take two good handfuls of the crops of Wormwood and put them into Ale, and let them stand all night, and then distill them in a Limbeck with a moderate fire.

To make sweet water.

To make sweet water of the best kind, take a thousand Damask Roses, two good handfuls of Lavender tops, a three-penny weight of Mace, two ounces of Cloves bruised, a quart of running water: put a little water into the bottom of an earthen pot, and then put in your Roses and Lavender, with the spices by little and little, and in the putting in, alwaies knead them down with your fist, and so continue it untill you have wrought up all your Roses and Lavender, and in the working between put in always a little of your water; then stop your pot close and let it stand in four dayes, in which time every morning and evening put in your hand, and pull from the bottom of your pot the said Roses, working it for a time, and then distill it, and hang in the glass of water a grain or two of Musk wrapt up in a piece of Sarcenet fine or e cloth.

Another way. Others to make sweet water, take of Ireos two ounces, of Calamus half an ounce, of Cypress roots half an ounce, of yellow Saunders nine drams, of Cloves bruised one ounce, of Storax and Calamint one ounce, and of Musk twelve grains, and infusing all these in Rose-water distill it.

To make Date Leach. To make an excellent Date-Leach, take Dates, and take out the stones, and the white rind, and beat them with Sugar, Cinamon and Ginger, very finely; then work it as you would work a piece of paste, and then print them as you please.

To make Sugar plate. To make a kind of Sugar plate, take Gum Dragon, and lay it in Rose-water two days: then take the powder of fair Heppes & Sugar, and the juice of an Orange, beat all these together in a mortar, then take it out, and work it with your hand and print it at your pleasure.

To make spice Cakes. To make excellent spice Cakes, take half a peck of very fine Wheat flowre, take almost one pound of sweet Butter, and some good Milk and cream mixt together, set it on the fire, and put in your Butter, and a good deal of Sugar, and let it melt together: then strain Saffron into your Milk a good quantity: then take seven or eight spoonfuls of good Ale barm, and eight eggs with two yelks, and mix them together, then put your Milk to it when it is somewhat cold, and into your flowre put Salt, Anniseed bruised, Cloves, and Mace, and a good deal of Cinamon; then work all together good and stiff, that you need not work in any flowre after, then put in a little Rose-water cold, then rubbe it well in the thing you knead it in and work it throughly: if it be not sweet enough, scrape in a little more Sugar, and pull it all in pieces, and hurle in a good quantity of Currants, and so work all together again, and bake your Cake as you see cause, in a gentle warm Oven.

To make Banbury Cakes. To make a very good *Banbury Cake*, take four pounds of Currants, and wash and pick them very clean, and dry them in a cloth: then take three Eggs, and put away one yelk, and beat them and strain them with Barm, putting thereto Cloves, Mace, Cinamon, and Nutmegs, then take a pint of Creame, and as much mornings Milk, and set it on the fire till the cold be taken away; then take flowre, and put in good store of cold

cold butter and sugar, then put in your eggs, barm and meal, and work them all together an hour or more; then save a part of the past, & the rest break in pieces, and work in your Currants; which done, mould your Cake of what quantity you please, and then with that paste which hath not any Currants, cover it very thin, both underneath and aloft. And so bake it according to the bigness.

To make the best March-pane, take the best Jordan Almonds, and blanch them in warm water, then put them into a stone-mortar, and with a wooden-pestel beat them to pap, then take of the finest refined Sugar well searst, and with it Damask-Rose-water, beat it to a good stiff paste, allowing almost to every Jordan Almond, three spoonfulls of sugar, then when it is brought thus to a paste, lay it upon a fair Table, and strewing searst sugar under it, mould it like leven, then with a rowling-pin rowl it forth, and lay it upon wafers wash'd with Rose-water; then pinch it about the sides, and put it into what form you please; then strew searst sugar all over it, which done, wash it over with Rose-water and sugar mixt together, for that will make the Ice; then adorn it with Comfets, guilding, or whatsoever devices you please, and so set it into a hot stove, and there bake it crispy, and serve it forth. Some use to mix with the paste Cinamon and Ginger finely searst, but I refer that to your particular taste.

To make the best March-pane.

To make paste of *Genoa*, you shall take Quinces after they have been boyled soft, and beat them in a mortar with refined sugar, Cinamon and Ginger finely searst, and Damask-Rose-water till it come to a stiff paste; and rowl it forth, and print it, and so bake it in a stove; and in this sort you may make paste of Pears, Apples, Wardens, Plums of all kinds, Cherries, Barberries, or what other fruits you please.

To make paste of Genoa, or any other paste.

To make conserve of any fruit you please, you shall take the fruit you intend to make conserve of, and if it be stone-fruit, you shall take out the stones: if other fruit, take away the paring and core, and then boyl them in fair running water to a reasonable height: then drain them from thence, and put them into a fresh Vessel with Claret-wine or White-wine, according to the colour of the fruit: and so boyl them

To make any Conserve.

to a thick pap, all to maſhing, breaking, and ſtirring them together: and then to every pound of pap, put to a pound of Sugar, and ſo ſtirre them all well together, and being very hot, ſtraine them through faire ſtrainers, and ſo pot it up.

To make a conſerve of Flowers.

To make conſerve of Flowers, as Roſes, Violets, Gilliflowers, and ſuch like; you ſhall take the flowers from the ſtalks, and with a pair of ſheers cut away the white ends at the roots thereof, and then put them into a ſtone mortar, or wooden brake, and there cruſh, or beat them, till they become to a ſoft ſubſtance: and then to every pound thereof, take a pound of fine refined Sugar, well ſearſt, and beat it all together, till it come to one intire body, and then pot it up, and uſe it as occaſion ſhall ſerve.

To make Wafers.

To make the beſt Wafers, take the fineſt wheat-flower you can get, and mix it with Cream, the yelks of Eggs, Roſe-water, Sugar, and Cinamon, till it be a little thicker than Pancake-batter, and then warming your Wafer Irons on a charcoal-fire, anoint them firſt with ſweet Butter, and then lay on your batter, and preſs it, and bake it white or brown at your pleaſure.

To make Marmalade of Oranges.

To make an excellent Marmalade of Oranges, take the Oranges, and with a Knife pare off as thin as is poſſible the uppermoſt rind of the Orange; yet in ſuch ſort, as by no means you alter the colour of the Orange: then ſteep them in fair water, changing the water twice a day, till you find no bitterneſs of taſte therein; then take them forth, and firſt boyl them in fair running water, and when they are ſoft, remove them into Roſe-water, and boyl them therein till they break: then to every pound of the pulpe, put a pound of refined Sugar, and ſo having maſht, and ſtirring them all well together, ſtrain it through very fair ſtrainers into boxes, and ſo uſe it as you ſhall ſee occaſion.

Additions to Banqueting-ſtuff.

Take a pottle of fine flower, and a pound of Sugar, a little Mace, and good ſtore of water to mingle the flower into a ſtiff paſte, and a good ſeaſon of Salt, and ſo knead it, and roul out the Cakes thin, and bake them on papers.

To make fine Cakes.

Fine bread.

Take a quarter of a pound of fine Sugar well beaten, and as much

much flowre finely bolted, with a quantity of Anniseeds a little bruised, and mingle all together; then take two Eggs, and beat them very well, whites and all; then put in the mingled stuff aforesaid, and beat all together a good while, then put it into a mould, wiping the bottome ever first with Butter, to make it come out easily, and in the baking, turn it once or twice as you shall have occasion, and so serve it whole or in slices at your pleasure.

To preserve Quinces for Kitchin service.

Take sweet Apples, and stamp them as you do for Cider, then press them through a bag as you do Verjuyce, then put it into a firkin wherein you will keep your quinces, and then gather your quinces, and wipe them clean, and neither core them nor pare them, but only take the blacks from the tops, and so put them into the firkin of Cider, and therein you may keep them all the year very fair, and take them not out of the liquor, but as you are ready to use them, whether it be for pyes, or any other purpose, and then pare them, and core them as you think good.

To make Ipocrat.

Take a gallon of Claret or White Wine, and put therein four ounces of Ginger, an ounce and an half of Nutmegs, of Cloves one quarter, of Sugar four pound; let all this stand together in a pot at least twelve hours, then take it, and put it into a clean bag made for the purpose, so that the Wine may come with good leisure from the spices.

To preserve Quinces.

Take quinces and wipe them very clean, and then core them, and as you core them, put the cores strait into fair water; and let the cores and the water boyl, when the water boyleth, put in the quinces unpared, and let them boyl till they be tender, and then take them out, and pare them, and ever as you pare them, put them strait into Sugar finely beaten: then take the water they were sodden in, and strain it through a fine cloth, and take as much of the same water as you think will make syrup enough for the Quinces, and put in some of your Sugar and let it boyl a while, and then put in your Quinces, and let them boyl a while, and turn them, and cast a good deal of Sugar upon them; they must seeth apace, and ever as you turn them, cover them still with Sugar, till you have bestowed all your Sugar; and when you think that your Quinces are tender enough, take them forth, and if your syrup be not stiff enough,

you

you may ſeeth it again after the quinces are forth. To every pound of Quinces you muſt take more than a pound of ſugar, for the more ſugar you take, the fairer your Quinces will be, and the better and longer they will be preſerved.

Conſerve of Quinces.

Take two gallons of fair water, and ſet it on the fire, and when it is luke-warm, beat the whites of five or ſix eggs, and put them into the water, and ſtir it well, and then let the water ſeeth, and when it riſeth up all on a curd, then ſcum it off. Take Quinces and pare them, and quarter them, and cut out the core: Then take as many pound of your Quinces as of your Sugar, and put them into your liquor, and let it boyl till your liquor be as high coloured as French-wine; and when they be very tender, then take a fair new Canvas cloth fair waſh'd, and ſtrain your Quinces through it with ſome of your liquor; (if they will not go through eaſily:) then if you will make it very pleaſant, take a little Muſk, and lay it in Roſe-water, and put it thereto, then take and ſeeth it untill it be of ſuch ſubſtance, that when it is cold it will cut with a knife; and then put it into a fair box, and if you pleaſe lay leaf-gold thereon.

To keep Quinces all the year.

Take all the parings of your Quinces that you make your conſerve withal, and three or four other Quinces, and cut them in pieces and boyl the ſame parings and the other pieces in two or three gallons of water, and ſo let them boyl till all the ſtrength be ſodden out of the ſame Quinces and parings, and if any ſcum ariſe whileſt it boyls, take it away; then let the ſaid water run thorough a ſtrainer into a fair Veſſel, and ſet it on the fire again, and take your Quinces that you will keep, and wipe them clean, and cut off the uttermoſt part of the ſaid Quinces, and pick out the kernels and cores as clean as you can, and put them into the ſaid liquor, and ſo let them boyl till they be a little ſoft, and then take them from the fire, and let them ſtand till they be cold, then take a little Barrel, and put into the ſaid Barrel the water that your Quinces be ſodden in; then take up your Quinces with a Ladle, and put them into your Barrel, and ſtop the Barrel cloſe, that no aire come into them, till you have fit occaſion to uſe them; and be ſure to take ſuch Quinces as are neither bruiſed nor rotten.

Take

Take of the best sugar, and when it is beaten, fearse it very fine and of the best Ginger, and Cinnamon; then take a little Gumdragon, and lay it in Rose-water all night, then pour the water from it, and put the same with a little white of an egg well beaten into a brass mortar, the sugar, ginger, cinnamon, and all together, and beat them together till you may work it like paste; then take it and drive it forth into cakes, and print them, and lay them before the fire, or in a very warm stove to bake. Or otherwise, take Sugar and Ginger, (as is before said) cinnamon and gum-dragon excepted, instead whereof, take only whites of Eggs, and so do as was before shewn you. Fine Ginger Cakes.

Take curds, the paring of Lemons, of Oranges, or Pome-citrons, or indeed any half ripe green fruit, and boyl them till they be tender in sweet wort; then make a sirrup in this sort, take three pounds of Sugar, and the whites of four eggs, and a gallon of water, then swing and beat the water and the eggs together, and then put in your Sugar, and set it on the fire, and let it have an easy fire, and so let it boyl six or seven walmes, and then strain it through a cloth, and set it on again till it fall from the spoon, and then put it into the rinds or fruits. To make Suckets.

Take a quart of Honey clarified, and seeth it till it be brown, and if it be thick, put to it a dish of water: then take fine crums of white bread grated, and put to it, and stirre it well, and when it is almost cold, put to it the powder of Ginger, Cloves, Cinnamon, and a little Licoras and Anniseeds: then knead it, and put it into a mould and print it; some use to put to it also a little Pepper, but that is according unto taste and pleasure. Course Ginger bread.

Dissolve sugar, or sugar-candy in Rose-water, boile it to an height, put in your roots, fruits or flowers, the syrrup being cold, then rest a little; after take them out, and boyl the sirrup again, then put in more roots, &c. then boyl the syrrup the third time to an hardness, putting in more Sugar, but not Rose-water, put in the roots, &c. the syrrup being cold, and let them stand till they candy. To candy any root, fruits, or flowers.

Thus having shewed you how to preserve, conserve, candy, and make pasts of all kinds, in which four heads consists the whole Art of banquetting dishes; I will now proceed to the ordering Ordering of Banquets.

or setting forth of a banquet, wherein you shall observe that March-panes have the first place, the middle place, and last place: your preserved fruits shall be disht up first, your pasts next, your wet suckets after them, then your dried suckets, then your Marmalades, and Cotiniates, then your Comfets of all kinds; Next your Pears, Apples, Wardens, bakt, raw, or rosted, and your Oranges and Lemons sliced; and lastly your Wafer-cakes. Thus you shall order them in the closet, but when they goe to the Table, you shall first send forth a dish made for shew only, as Beast, Bird, Fish, Fowl, according to invention: then your March-pane, then preserved Fruit, then a Past, then a wet sucket, then a dry sucket, Marmalade, comfets, apples, peares, wardens, Oranges, and Lemons sliced, and then wafers, and another dish of preserved fruits, and so consequently all the rest before, no two dishes of one kind, going or standing together, and this will not only appear delicate to the eye, but invite the appetite with the much variety thereof.

Ordering of great Feasts and proportion of expence.

Now we have drawn our *House-wife* into these severall Knowledges of Cookery, in as much as in her is contained all the inward Offices of Houshold, we will proceed to declare the manner of serving and setting forth of meat for a great Feast, and from it derive meaner, making a due proportion of all things; for what availes it our good *Hous-wife* to be never so skilfull in the parts of Cookery, if she want skill to marshall the dishes, and set every one in his due place, giving precedency according to fashion and custome. It is like to a Fencer leading a band of men in a rout, who knows the use of the weapon, but not how to put men in order. It is then to be understood, that it is the Office of the Clerk of the Kitchin, (whose place our *House-wife* must many times supply) to order the meat at the Dresser, and deliver it unto the Sewer, who is to deliver it to the Gentlemen, and Yeomen-waiters to bear to the Table. Now because we allow no Officers but our *House-wife*, to whom we only speak in this Book, she shall first marshall her Sallets, delivering the Grand Sallet first, which is evermore compound: then green Sallets, then boyled Sallets, then some smaller compound Sallets. Next unto Sallets, she shall deliver forth all her Fricases, the simple first, as Collops, Rashers, and such like, then

then compound Fricases; after them all, her boyled meates in their degree, as simple broths, stewed-broths, and the boylings of sundry Fowles. Next them, all sorts of Roſt-meates, of which the greateſt firſt, as chine of Beef, or ſurloyne, the Jigget or legs of Mutton, Gooſe, Swan, Veale, Pig, Capon, and ſuch like. Then bak'd meats, the hot firſt, as Fallow-Deer in Paſty, Chickens, or Calves foot pye and Douſet. Then cold bak'd meats, Pheſant, Partridges, Turkey, Gooſe, Wood-cock, and ſuch like. Then laſtly, Carbanadoes, both ſimple and compound. And being thus Marſhall'd from the Dreſſer, the Sewer upon the placing them on the Table, ſhall not ſet them down as he received them, but ſetting the Sallets extravagantly about the Table, mix the Fricaſes about them, then the boyld meats amongſt the Fricaſes, roſt meats amongſt the boyld, bak'd meats amongſt the roſt, and Carbonadoes amongſt the bak'd, ſo that before every Trencher may ſtand a Sallet, a Fricaſe, a boyld meat, a roſt meat, a bak'd meat, and a Carbonado, which will both give a moſt comely beauty to the Table, and very great contentment to the Gueſts. So likewiſe in the ſecond courſe, ſhe ſhall firſt preferre the leſſer Wild-fowl, as Mallard, Teyl, Snipe Plover, Wood-cock, and ſuch like: then the leſſer Land-fowl, as Chicken, Pidgeons, Partridge, Raile, Turkey Chickens, young Pea-hens, and ſuch like.

Then the great Wild-fowl, as Bittern, Hearn, Shoveler, Crane, Buſtard, and ſuch like. Then the greater Land-fowls, as Peacocks, Pheſant, Puets, Gulls, and ſuch like. Then hot bak'd meats, as Marrow-bone pye, Quince-pye, Florentine, and Tarts.

Then cold bak'd meats, as Red Deer, Hare-pye, Gammon of Bacon-pye, Wild-bore, Roe-pye, and ſuch like, and theſe alſo ſhall be marſhald at the Table as the firſt courſe, not one kind all together, but each ſeverall ſort mixt together, as a leſſer Wild-fowle, and a leſſer Land-fowle, a great Wild-foule, and a great Land-fowle, a hot bak'd meat and a cold; and for made diſhes and Quelquechoſes, which rely on the invention of the Cook, they are to be thruſt in into every place that is empty, and ſo ſprinkled over all the Table: and that is the beſt method for the extraordinary great Feaſts of

Princes. But in case it be for much more humble men, then lesser care and fewer dishes may discharge it: Yet before I proceed to that lower rate, you shall understand that in these great Feasts of Princes, though I have mentioned nothing but Flesh, yet is not Fish to be exempted; for it is a beauty and an honour unto every Feast, and is to be placed amongst all the several services, as thus; amongst your Sallets, all sorts of soused fish that lives in the fresh water; amongst your Fricases all manner of fryed fish; amongst your boyld meats, all fish in broths; amongst your rost meats, all fish served hot, but dry; amongst the bak'd meats, sea-fish that is soused, as Sturgion, and the like; and amongst your Carbonadoes fish that is broyld. As for your second Course, to it belongeth all manner of shell-fish, either in the shell, or without; the hot to goe up with the hot meat, and the cold with the cold.

And thus shall the Feast be Royall, and the Service Worthy.

Now for a more humble Feast, or an ordinary proportion which any good man may keep in his Family, for the entertainment of his true and worthy friends, it must hold limitation with his provision, and the season of the year; For Summer affords what Winter wants, and Winter is Master of that, which Summer can but with difficulty have: it is good then for him that intends to Feast, to set down the full number of his full dishes, that is, dishes of meat that are of substance, and not empty, or for shew; and of these sixteen is a good proportion for one course unto one messe, as thus, for example; First, a shield of Brawn with mustard, Secondly, a boyl'd Capon, Thirdly, a boyld piece of Beef, Fourthly, a chine of Beef rosted, Fifthly, a Neats tongue rosted, Sixthly, a Pig rosted, Seventhly, Chewets bak'd, Eighthly, a Goose rosted, Ninthly, a Swan rosted, Tenthly, a Turkey rosted, the Eleventh, a haunch of Venison rosted, the Twelfth, a Pasty of Venison, the Thirteenth, a Kid with a pudding in the belly, the Fourteenth, an Olive-pye, the Fifteenth, a couple of Capons, the Sixteenth, a Custard or Dousets. Now to these full dishes may be added Sallets, Fricases, Quelquechoses, and de-

devised paste, as many dishes more which make the full service no less then two and thirty dishes, which is as much as can conveniently stand on one Table, and in one mess; and after this manner you may proportion both your second and third course, holding fulness in one half of the dishes, and shew in the other, which will be both frugall in the spender, contentment to the gueſt, and much pleasure and delight to the beholders. And thus much touching the ordering of great feasts, and ordinary contentments.

CHAP. III.

Of Distillations, and their vertues, and of Perfuming.

WHen your English House wife is exact in these Rules before rehearsed, and that she is able to adorn and beautifie her Table, with all the vertuous illustrations meet for her knowledge; she shall then sort her mind to the understanding of other Housewifely secrets, right profitable and meet for her use, such as the want thereof may trouble her when need or time requires.

Therefore first I would have her furnish her self of very good Stills, for the Distillation of all kinds of Waters, which Stills would either be of Tin, or sweet Earth, and in them she shall distill all sorts of Waters meet for the health of her Household, as Sage water, which is good for all Rheumes, and Collicks; Raddish water, which is good for the stone; Angelica water good against infection: Celandine water for sore eyes: Vine water for itchings; Rose water, and Eye bright water for dimme sights; Rosemary water for Fistulaes: Treacle water for mouth Cankers; Water of Cloves for the pain in the Stomach: Saxifrage water for Gravell and hard Urine; Allom water for old Ulcers, and a world of others, any of which will last a full year at the least. Then she shall know that the best waters for the smoothing of the skin, and keeping the face delicate and amiable, are those which are distilled from Bean-flowers, from Strawburies, from Vine leaves, from Goates-milk, from Asses milk, from the whites of Eggs, from the flowers

Of the nature of Waters

flowres of Lillies, from Dragons, from Calves feet, from bran, or from yelks of Eggs, any of which will last a year or better.

Additions to distillations.

To distill water of the colour of the herb or flower you desire.

First distill your water in a stillatory, then put it in a glass of great strength, and fill it with those flowers again (whose colour you desire) as full as you can, and stop it, and set it in the stillatory again, and let it distill, and you shall have the colour you distill.

To make Aqua vitæ.

Take of Rosemary flowers two handfulls, of Marjerom, Winter savory, Rosemary, Rue, unset Time, Germander, Ribwort, Harts tongue, Mouseare, white Wormwood, Bugloss, Red Sage, Liver wort, Hoar hound, fine Lavender, Hyssop-crops, Penny-royal, Red fennel, of each of these one handfull; of Elicampane roots, clean pared and sliced, two handfulls: Then take all these aforesaid and shred them, but not wash them, then take four gallons and more of strong Ale, and one gallon of Sack lees, and put all these aforesaid herbes shred into it, and then put into it one pound of Lycoras bruised, half a pound of Anniseeds clean sifted and bruised, and of Mace and Nutmegs bruised of each one ounce: then put all together into your stilling pot, close covered with Rye paste and make a soft fire under your pot, and as the head of the Limbeck heateth, draw out your hot water and put in cold, keeping the head of your Limbeck still with cold water, but see that your fire be not too rash at the first, but let your water come at leisure; and take heed unto your stilling, that your water change not white: for it is not so strong as the first draught is; and when the water is distilled, take a gallon glass with a wide mouth, and put therein a pottle of the best water and cleerest, and put into it a pottle of *Rosa solis*, and half a pound of Dates bruised, and one ounce of grains, and half a pound of Sugar, half a pound of seed pearl beaten, three leaves of fine Gold, stir all these together well, then stop your glass, and set it in the Sun the space of one or two months, and then clarifie it, and use it at your discretion: for a spoonfull or two at a time is sufficient, and the vertues are infinite.

Another excellent Aqua-vitæ.

Fill a pot with red Wine clean and strong, and put therein the

the powders of Cammomile, Jilly flowrs, Ginger, Pellitory, Nutmeg, Gallengal, Spicknard, Quenebus, Grains of pure long pepper, black pepper, Cummin, Fennel seed, Smallage, Parsley, Sage, Rue, Mint, Calamint, and Horshow of each of them alike quantity, and beware they differ not the weight of a dram under or above: then put all the powders above-said into the wine, and after put them into the distilling pot, and distill it with a soft fire, and look that it be well luted about with Rye paste, so that no fume or breath goe forth, and looke, that the fire be temperate: also receive the water out of the Lymbeck into a glass Vial. This water is called the water of Life, and it may be likened to Balme for it hath all the vertues and properties which Balme hath. This water is cleer, and lighter than Rose-water, for it will fleet above all liquors, for if oyle be put above this water, it sinketh to the bottome, This water keepeth Flesh, and Fish, both Raw, and Sodden, in his own kind and state, it is good against Aches in the Bones, the Pox, and such like: neither can any thing kept in this water either rot or putrifie; it doth draw out the sweetness, savour, and vertues of all manner of spices, roots and herbs that are wet or layd therein: it gives sweetness to all manner of water that is mixt with it, it is good for all manner of cold sicknesses, and namely for the Palsie or trembling joynts, and stretching of the sinews; it is good against the cold gout, and it maketh an old man seem young, using to drink it fasting, and lastly it fretteth away dead flesh in wounds, and killeth the Canker.

To make Aqua composita.

Take Rosemary, Thyme, Hyssop, Sage, Fennel, Nep, roots of Elicampane, of each an handfull, of Marjerom and Penny-Royall of each half a handfull, eight slips of red Mint, halfe a pound of Lycoras, half a pound of Anniseeds, and two Gallons of the best Ale that can be brewed, wash all these herbs clean, and put into the Ale, Lycoras, Anniseeds, and herbs into a clean brass pot, and set your Limbeck thereon, and paste it round about that no ayr come out, then distill the water with a gentle fire, and keep the Limbeck coole above, not suffering it to run too fast; and take heed when your water changeth

changeth colour, to put another glass under, and keep the first water for its most precious, and the later water keep by it selfe and put it into your next pot, and that shall make it much better.

A very principal Aqua-composita.

Take of Balm, of Rosemary flowres, tops and all, of dryed Red Rose leaves, of Penny-royal, of each of these a handfull, one root of Elicampane, the whitest that can be got, three quarters of a pound of Lycoras, two ounces of Cinnamon, two drams of great Mace, two Drams of Galengal, three drams of Coriander seeds, three drams of Carraway seeds, two or three Nutmegs cut in four quarters, an ounce of Anniseeds, a handful of borrage. you must chuse a fair, Sunny day to gather the herbs in: you must not wash them, but cut them in sunder, and not too small; then lay all your herbs in souse all night and a day, with the spices grosly beaten or bruised, and then distill it in order aforesaid: this was made for a learned Physitians own drinking.

To make the Emperial water.

Take a gallon of Gascoine Wine, Ginger, Galengall, Nutmegs, Grains, Cloves, Anniseeds, Fennel seeds, Carraway seeds, of each one dram, then take Sage, Mint, Red roses, Thyme, Pellitory, Rosemary, Wild-time, Camomil and Lavender, of each a handfull, then bray the spices small, and the herbs also, & put all together into the Wine, and let it stand so twelve hours, stirring it so divers times, then distill it with a Limbeck, and keep the first water, for it is the best; of a Gallon of Wine you must not take above a quart of Water: this Water comforteth the Vitall spirits, and helpeth the inward diseases that come of cold, as the palsie, the contraction of sinews; also it killeth worms, and comforteth the stomach, it cureth the cold Dropsie, helpeth the stone, the stinking breath, and maketh one seeme young.

To make Cinamon wate..

Take a pottle of the best Sack, and halfe a pint of Rose-water, a quarter and halfa pound of good Cinnamon well bruised but not small beaten, distill all these together in a Glass-still, but you must carefully look to it, that it boyl not over hastily, and attend it with cold wet cloths to cool the top of the still if the water should offer to boyl too hastily. This water is very Soveraign for the stomach, the head, and all the inward

inwards parts, it helps digestion, and comforteth the vitall spirits.

Six most precious waters which Hypocrates made & sent to a Queen sometimes living in England.

1. Take Fennell, Rue, Vervine, Endive, Betony, Germander, Red-roses, Capillus Veneris, of each an ounce; stamp them, and keep them with white wine a day and a night, and distill water of them, which water will divide in three parts: the first water you shall put in a glass by it self, for it is more precious than gold, the second as silver, and the third as balm, and keep these three parts in glasses: this water you shall give the Rich for gold, to meaner for silver, to poor men for balm. This water keepeth the sight in clearness, and purgeth all gross humors.

2. Take Sal-gemmæ a pound, and lap it in a green dockleaf, and lay it in the fire till it be well rosted and wax white, then put it in a glass against the air a night, and on the morrow it shall be turned to a white water like unto Chrystall, keep this water well in a glass, and put a drop into the eye, and it shall cleanse and sharp the sight: It is good for any evill at the heart, for the Morphew, and the Canker in the mouth, and for divers other evills in the body.

3. Take the roots of Fennel, Parsly, Endive, Betony, of each an ounce, and first wash them well in luke-warm water, and bray them well with white Wine a day and a night, and then distill them into water. This water is more worthy then Balme; it preserveth the sight much, and cleanseth it of all filth, it restraineth tears, and comforteth the head, and avoideth the water that cometh through the pain of the head.

4. Take the seeds of Parsly, Achannes, Vervine, Carawayes, and Centaury, of each ten drams, beat all these together, and put it in warm water a day and a night, and put it in a vessel to distill: This water is a precious water for all sore eyes, and very good for the health of Mans or Womans body.

5. Take Limmell of Gold, Silver, Lattin, Copper, Iron, Steel, and Lead: and take Litharge of Gold and Silver, take Calamint, and Columbine, and steep all together, the first day in the Urine of a man-child, that is between a day and a

night; the second day in white Wine; the third day in the juyce of Fennel; the fourth day in the white of Eggs; the fifth day in womans milk that nurseth a man-child; the sixth day in red Wine; the seventh day in the whites of Eggs; and upon the eighth day bind all these together, and distill the water of them, and keep this water in a vessel of Gold or Silver. The vertues of this water are these: First, It expelleth all Rheumes, and doth away all manner of sickness from the eyes, and wears away the pearl, pin and web: it draweth again into his own kind the eye-lids that have been bleared, it easeth the ache of the head, and if a man drink it, it maketh him look young, even in old age; besides a world of other most excellent vertues.

6. Take the Goldsmiths-stone, and put it into the fire, till it be red hot, and quench it in a pint of white Wine, and do so nine times, and after grind it, and beat it small, and cleanse it as clean as you may, and after set it in the Sun with waters of Fennel distilled, and Vervine, Roses, Celandine, and Rue, and a little Aqua vitæ; and when you have sprinkled it in the water nine times, put it then in a vessel of glasse, and yet upon a reversion of the water distill it, till it passe over the touch four or five inches; and when you will use it, then stir it all together, and then take up a drop with a feather, and put it on your nail, and if it abide, it is fine and good: then put it in the eye that runneth, or anoint the head with it if it ake, and Temples, and believe it, that of all waters this is the most precious, and helpeth the sight, or any pain in the head.

The vertues of severall waters.

The water of Chervile is good for a sore mouth.

The water of Calamint is good for the stomach.

The water of Plantane is good for the flux, and the hot dropsie.

Water of Fennell is good to make a fat body small, and also for the eyes.

Water of Violets is good for a man that is sore within his body, and for the reins, and for the liver.

Water of Endive is good for the Dropsie, and for the Jaundise and the stomach.

Water

Water of Borage is good for the stomach, and for the Iliaca passio, and many other sicknesses in the body.

Water of both Sages is good for the Palsie.

Water of Betony is good for old age, and all inward sicknesses.

Water of Radish, drunk twice a day, at each time an ounce, or an ounce and a half, doth multiply and provoke Lust, and also provoketh the terms in women.

Rosemary Water, (the face washed therein both morning and night) causeth a fair and clear countenance; also the head washed therewith, and let dry of it self, preserveth the falling of the hair, and causeth more to grow: also two ounces of the same drunk, driveth Venome out of the body in the same sort as Mithridate doth; the same twice or thrice drunk at each time half an ounce, rectifieth the mother, and it causeth women to be fruitfull. When one maketh a bath of this decoction, it is called the bath of Life: the same drunk, comforteth the heart, the brain, and the whole body, and cleanseth away the spots of the face; it maketh a woman look young, and causeth women to conceive quickly, and hath all the vertues of Balm.

Water of Rew, drunk in a morning four or five days together, at each time an ounce, purifieth the flowers in women: the same water drunk in the morning fasting, is good against the griping of the bowels, and drunk at morning, and at night, at each time an ounce, it provoketh the termes in women.

The water of Sorrell drunk, is good for all burning and pestilent Feavers, and all other hot sicknesses: being mixt with Beer, Ale, or Wine, it slaketh the thirst: it is also good for the Yellow Jaundise, being taken six or eight dayes together: it also expelleth from the Liver, if it be drunk, and a cloth wet in the same, and a little wrung out, and so applied to the right side over against the Liver, and when it is dry, then wet another, and apply it; and thus do three or four times together.

Lastly, the water of Angelica is good for the head, for inward infection, either of plague or pestilence, it is very so-

veraign for sore breasts ; also the same water being drunk of, twelve or thirteen days together, is good to unlade the stomach of gross humours and superfluities, and it strengthneth and comforteth all the universall parts of the body : and lastly, it is a most soveraign medicine for the Gout, by bathing the diseased members much therein.

Now to conclude and knit up this Chapter, it is meet that our Housewife know that from the eighth of the Kalends of the Month of *April*, unto the eighth of the Kalends of *July*, all manner of herbs and leaves are in that time most in strength, and of the greatest vertue to be used and put in all manner of Medicines ; also from the eighth of the Kalends of *July*, unto the eighth of the Kalends of *October*, the stalks, stems, and hard branches of every herb and plant is most in strength to be used in Medicines ; and from the eighth of the Kalends of *October*, unto the eighth of the Kalends of *April*, all manner of roots of herbs and plants are the most of strength and vertue to be used in all manner of Medicines.

An excellent water for perfume.

To make an excellent sweet water for perfume, you shall take of Basill, Mints, Marjerom, Corn-flag-roots, Hyssop, Savory, Sage, Balme, Lavender and Rosemary, of each one handfull ; of Cloves, Cinnamon, and Nutmegs, of each half an ounce ; then three or four Pome-citrons cut into slices, infuse all these into Damask-Rose-water, the space of three dayes, and then distill it with a gentle fire of Char-coal, then when you have put it into a very clean glass, take of fat Musk, Civet, and Amber-greece, of each the quantity of a scruple, and put it into a rag of fine Lawn, and then hang it within the water, This being burnt either upon a hot pan, or else boyled in perfuming-pans with Cloves, Bay-leaves, and Lemon-pills, will make the most delicatest perfume that may be, without any offence, and will last the longest of all other sweet perfumes, as hath been found by experience.

To perfume Gloves.

To perfume Gloves excellently, take the oyle of sweet Almonds, oyle of Nutmegs, oyl of Benjamin, of each a dram, of Amber-greece one grain, fat Musk two grains : mixe them all together, and grind them upon a Painters stone, and then anoint the Gloues therewith, yet before you anoint them

them, let them be dampishly moistned with Damask Rose-water.

To perfume a Jerkin well, take the oyl of Benjamin a penny-worth, oyl of spike and oyl of oliues, half penny worths of each, and take two spunges, and warm one of them against the fire and rub your jerkin therewith, and when the oyl is dryed take the other spunge and dip it in the oyl, and rub your jerkin therewith till it be dry, then lay on the perfume before prescribed for gloves. To perfume a jerkin.

To make very good washing balls, take Storax of both kinds, Benjamin, Calamus Aromaticus, Labdanum, of each alike; and bray them to powder with Cloves and Orris; then beate them all with a sufficient quantity of Sope till it be stiff, then with your hand you shall work it like paste, and make round balls thereof. To make Washing-balls.

To make Musk balls, take Nutmegs, Mace, Cloves, Saffron, and Cinnamon, of each the weight of two pence and beat it to fine powder, of Mastick the weight of two pence half penny, of Storax the weight of six pence, of Labdanum the weight of ten pence; of Ambergreece the weight of sixpence; and of Musk four grains, dissolve and work all these in hard sweet sope till it come to a stiff paste, and then make balls thereof. To make a Musk-ball.

To make a good perfume to burn, take Benjamin one ounce, Storax, Calamint two ounces, of Masticke white, Ambergreece, of each one ounce; Ireos, Calamus Aromaticus, Cypress wood, of each half an ounce, of Camphire one scruple, Labdanum one ounce; beat all these to powder, then take of Sallow Charcole six ounces, of liquid Storax two ounces, beat them all with Aqua vitæ, and then you shall rowl them into long round rowls. A perfume to burn.

To make Pomanders, take two penny worth of Labdanum, two penny worth of Storax liquid, one penny worth of Calamus Aromaticus, as much Balm, half a quarter of a pound of fine wax, of Cloves and Mace two penny worth, of liquid Aloes three penny worth, of Nutmegs eight penny worth, and of Musk four grains; beat all these exceedingly together till they come to a perfect substance, then mould it in any fashion you please, and dry it. To make Pomanders.

To

To make Vinegar.

To make excellent strong Vinegar, you shall brew the strongest Ale that may be, and having tunned it in a very strong vessel, you shall set it either in your Garden or some other safe place abroad, where it may have the whole Summers day Sun to shine upon it and there let it lye till it be extream sowre; then, into a Hogshead of this Vinegar put the leaves of four or five hundred Damask roses, and after they have layen for the space of a month therein, house the vinegar and draw it as you need it.

To make dry vinegar.

To make dry vinegar which you may carry in your pocket, you shall take the blacks of green Corn either Wheat or Rye, and beat it in a mortar with the strongest vinegar you can get, till it come to paste, then roule it into little balls, and dry it in the Sun till it be very hard, then when you have occasion to use it cut a little piece thereof and dissolve it in Wine, and it will make a strong vinegar.

To make Verjuyce.

To make Verjuyce, you shall gather your Crabs as soon as the Kernels turn black, and having laid them a while in a heap to sweat together, take them and pick them from the stalks, blacks and rottenness: then in long troughs with beetles for the purpose, crush and break them all to mash; then make a bag of course hair-cloth as square as the press, and fill it with the crusht Crabs, then put it into the press, and press it, while any moysture will drop forth, having a clean vessel underneath to receive the liquor; this done, tun it up in sweet Hogsheads, and to every Hogshead put half a dozen handfulls of Damask rose leaves, and then bung it up, and spend it as you shall have occasion.

Additions to conceited secrets.

Many other pretty secrets there are belonging unto curious *Houf-wifes*; but none more necessary than these already rehearsed except such as shall hereafter follow in their proper places.

Take of Orris six ounces, of Damask Rose leaves as much, of Marjerom and sweet Basil of each an ounce, of Cloves two ounces, yellow Sanders two ounces, of Citron pils seven drams, of Lignum aloes one ounce, of Benjamin one ounce, of Storax one ounce, of Musk one dram; bruise all these, and put them into a bag of silk or linnen, but silk is the best.

To make sweet powder for bags.

Take of Orris four ounces, of Gallaminis one ounce, of Ciris half an ounce, of Rose leaves dryed two handfuls, of dryed Marjeron

jerom one handful, so Spike one handful, Cloves one ounce, Benjamin and Rax of each two ounces, of white Sanders, and yellow of each one ounce, beat all these into a gross powder, then put to it of Musk a dram, of Civet half a dram, and of Ambergreese half a dram; then put them into a taffety bag and use it. To make sweet bags.

Take of Bay-leaves one handfull, of red Roses two handfuls, of Damask roses three handfuls, of Lavender four handfuls, of Basil one handfull, Marjerom two handfuls, of Camomile one handful, of the young tops of sweet Bryer two handfuls, of Dandelion, Tansey two handfuls, of Orange peels six or seven ounces, of cloves, & mace a groats worth: put all these together in a pottle of new Ale in corns, for the space of three days, shaking it every day three or four times; then distill it the fourth day in a Stil with a continual soft fire. and after it is distilled, put into it a grain or two of musk. How to make sweet water.

Take a quart of *Malmsey lees*, or a quart of *Malmsey* simply, one handfull of Marjerom, of Basil as much, of Lavender four handfuls, Bay leaves one good handfull, Damask Rose leaves four handfuls, and as many of Red, the peels of six Oranges, or for want of them one handfull of the tender leaves of Wall-Nut-trees, of Benjamin half an ounce, of Calamus Aromaticus as much, of Camphire four drams, of Cloves one ounce, of Bildamum half an ounce; then take a pottle of running water, and put in all these spices bruised into your water and *Malmsey* together, in a close stopped pot with a good handfull of Rosemary, and let them stand for the space of six days: then distill it with a soft Fire: then set it in the Sun sixteen days with four grains of musk bruised. This quantity will make three quarts of water, *Probatum est*. A very Rare and pleasant Damask-water.

Take and brew very strong Ale, then take half a dozen Gallons of the first running, and set it abroad to cool, and when it is cold put yest into it, and head it very strongly; then put it up in a firkin, and distill it in the Sun, then take four or five handfull of beans, and parch them in a pan till they burst: then put them in as hot as you can into the Firkin, and stop it with a little clay about the bung hole; then take a handfull of clean Rye-Leaven and put in the Firkin; then take a quantity of barberies, and bruise and strain them into the Firkin, and a good To make the best vinegar.

good handfull of Salt, and let them lye and work in the Sun from *May* till *August*; then having their full strength, take Rose leaves and clip the white ends off, and let them dry in the Sun, then take Elder flowers, and pick them and dry them in the Sun, and when they are dry put them in bags, and keep them all the Winter: then take a pottle pot and draw forth a pottle out of the ferkin into the pottle, and put a handful of the red Rose-leaves, and another of the Elder flowers into the pottle, and then hang it in the Sun, where you may occupy the same, and when it is empty, take out all the leaves and fill it again as you did before.

To perfume Gloves. Take Angelica water, and Rose water, and put into them the powder of Cloves, Amber greece, Musk, & Lignum Aloes, Benjamin and Calamus Aromaticus: boyl these till half be consumed: then strain it and put your Gloves therein; then hang them in the Sun to dry, and turn them often: and thus three times, wet them and dry them again: or otherwise, take Rose water and wet your Gloves therein, then hang them up till they be almost dry; then take half an ounce of Benjamin and grind it with the oyle of Almonds, and rub it on the Gloves till it be almost dryed in: then take twenty grains of Amber-greece, and twenty grains of Musk, and grind them together with oyle of Almonds, and so rub it on the Gloves, and then hang them up to dry, or let them dry in your bosome, and so after use them at your pleasure.

CHAP. IV.

The ordering, preserving, and helping of all sorts of Wines, and first of the choyce of sweet Wines.

I Do not assume to my self this Knowledge of the Vintners secrets, but I ingeniously confess, that one profest skilfull in the Trade, having rudely written, and more rudely disclosed this secret, and preferring it to the Stationer, it came to me to be published, which I have done, knowing that it is necessary, &c.

It is necessary that our English Housewife be skilfull in the election, preserving, and curing of all sorts of Wines, because they be usual charges under her hands, and by the least neg-

neglect muſt turn the Husband to much loſs: therefore to ſpeak firſt of the election of ſweet Wines, ſhe muſt be carefull that her Malmſeys be full Wines, pleaſant, well hewed and fine: that *Baſtard* be fat, and if it be tawny it skils not; for the tawney *Baſtards* be always the ſweeteſt. Muscadine muſt be great, pleaſant and ſtrong with a ſweet ſcent, and with Amber colour. Sack if it be Seres (as it ſhould be) you ſhall know it by the mark of a cork burned on one ſide of the bung, and they be ever full gage, and ſo are no other Sacks, and the longer they lye, the better they be.

To make Muſcadine, and give it a flavor

Take a pleaſant Butt of Malmſey, and draw it out a quarter and more; then fill it up with fat *Baſtard* within eight gallons or thereabouts, and parel it with ſix Eggs, yelks and all, one handfull of bay ſalt, and a pint of conduit water to every parel, and if the Wine be of high colour, put in three gallons of new milk, but skim off the cream firſt, and beat it well: or otherwiſe, if you have a good Butt of *Malmſey*, and a good Pipe of *Baſtard*, you muſt take ſome empty Butt or Pipe, and draw thirty gallons of *Malmſey*, and as many of *Baſtard*, and beat them all well together; and when you have ſo done, take a quarter of a pound of Ginger, and bruiſe it and put it into your veſſel, then fill it up with *Malmſey* and *Baſtard*: Or otherwiſe thus, if you have a pleaſant Butt of *Malmſey* which is called Ralt-mow, you may draw out of it forty Gallons; and if your *Baſtard* be very faint, then thirty Gallons of it will ſerve to make it pleaſant: then take four gallons of new milk, and beat it, and put it into it when it lacketh of twelve gallons of full, and then make your flavor.

How to flaver Muskadine.

Take an ounce of Corianders, of bay Salt, of Cloves, of each as much, one handfull of Savory: let all theſe be blended, and bruiſed together, and ſow them cloſe in a bagge, and take half a pint of Damask water, and lay your flavor into it, and then put it into your Butt, and if it fine, give it a parel, and then fill it up, and let it lye till it fine: or elſe thus, take Coriander Roots a penny-worth, one pound of Anniſeeds, one penny-worth in Ginger, bruiſe them together, and put them into a bag as before, and make your bag long and ſmall, that it go in and

out at the bung-hole, and when you do put it in, fasten it with a thread at the bung; then take a pint of the strongest Damask water and warme it lukewarme, then put it into the Butt, and then stop it close for two or three dayes at least; and then, if you please, you may set it a-breach.

To apparel Muskadine when it comes new to be fine in twenty four hours.

Take seven whites of new laid Eggs, two handfulls of Bay-salt, and beat them well together, and put therein a pinte of Sack or more, and beat them till they be as short as Snow.; then over-draw the But seven or eight Gallons, and beat the Wine, and stirre the Lees, and then put in the parel, and beat it, and so fill it up, and stop it close, and draw it on the morrow.

To make white bastard.

Draw out of a Pipe of *Bastard* ten Gallons, and put to it five Gallons of new milk, and skimme it as before, and all to beat it with the parcel of eight whites of Eggs, and a handful of Bay salt, and a pint of Conduit water, and it will be white and fine in the morning. But if you will make very fine *Bastard*, take a White wine Hoggs-head, and put out the Lees, and wash it clean, and fill it half full, and half a quarter, and put it to four Gallons of new milk, and beat it well with the whites of fixe Eggs, and fill it up with White wine and Sack, and it will be white and fine.

How to help Bastard being eager.

Take two Gallons of the best *stoned Honey*, and two Gallons of White wine, and boyl them in a fair pan, skimme it clean, and strain it through a fair cloth that there be no motes in it: then put to it one ounce of *Corianders*, and one ounce of *Anniseeds*, four or five *Orange-peels* dry and beaten to powder: let them lye three days: then draw your *Bastard* into a clean Pipe, then put in your honey with the rest, and beat it well: then let it lye a week, and touch it not, after draw it at your pleasure.

To make bastard white, and to rid away Leggs.

If your *Bastard* be fat and good, draw out forty Gallons, then you may fill it up with the Lags of any kind of white wines or Sacks; then take five Gallons of new milk, and first take away the Cream, then strain it through a clean cloth, and when your Pipe is three quarters full, put in your milk; then beat it very well, and fill it so, that it may lack fifteen Gallons, then

apparel

aparel it thus : take the whites onely of ten Eggs, and beat them in a fair tray with *Bay ſalt* and *Conduit water* ; then put it into the pipe and beat it well, and ſo fill it up, and let it ſtand open all night ; and if you will keep it any while, you muſt on the morrow ſtop it cloſe, and to make the ſame drink like *Oſſey*, give it this flavor : take a pound of *Aniſeeds*, two pence in *Corianders*, two pence in *Ginger*, two pence in *Cloves*, two pence in *Grains*, two pence in long *Pepper*, and two pence in *Lycoras* ; bruiſe all theſe together : then make two bags of linnen cloth, long and ſmall, and put your ſpices into them, and put them into the pipe at the bung, making them faſt there with a thread, that it may ſink into the Wine, then ſtop it cloſe, and in two days you may broach it.

A remedy for baſtard if it prick.

Take and draw him from his Lees, if he have any, and put the Wine into a *Malmſey butt* to the Lees of *Malmſey*, then put to the *Baſtard* that is in the *Malmſey but*, nigh three Gallons of the beſt *Wort* of a freſh tap, and then fill him up with *Baſtard* or *Malmſey*, or *Cute* if you will ; then aparel it thus : Firſt, *Parel him, and beat him with a ſtaff, and then take the whites of four new laid Eggs, and beat them with a handful of ſalt till it be as ſhort as Moſs, and then put a pint of running water therein, and ſo fill the Pipe up full, and lay a little ſtone on the bung, and ſet it abroach within four and twenty hours, if you will.*

If you have a good But of *Malmſey*, and a But or two of *Sack*, that will not be drunk : for the *Sack* prepare ſome empty But or Pipe, and draw it more than half full of Sack : then fill it up with *Malmſey*, and when your But is full within a little, put into it three Gallons of *Spaniſh Cute*, the beſt that you can get ; then beat it well. then take your Taſter, and ſee that it be deep coloured ; then fill it up with Sack, and give it aparel, and beat it well ; the aparel is this : Take the yelks of ten Eggs, and beat them in a clean baſon with a handfull of *Bay-ſalt*, and a quart of *Conduit water*, and beat them together with a little piece of *Birch*, and beat it till it be as ſhort as *Moſſe*, then draw five or ſix gallons out of your But ; then beat it again, and then fill it up, and the next day it will be ready

to be drawn: this aparel will serve both for *Muscadine*, *Bastard* and for *Sack*.

To shift Malmsey, and to rid away ill wines.

If you have two principal Buts of *Malmsey*, you may make three good Buts with your Laggs of Claret and Sack, if you put two gallons of red Wine in a Butt, it will save the more *Cute*: then put two or three gallons of *Cute*, as you see cause; and if it be *Spanish Cute*, two gallons will go further than five gallons of *Candy Cute*, but the *Candy Cute* is more naturall for the *Malmsey*: also one Butt of good *Malmsey*, and a Butt of Sack that hath lost his colour, will make two good Buts of *Malmsey*, with the more *Cute*; and when you have fil'd your buts within twelve gallons, then put in your *Cute*, and beate it half an hour and more: then put in your parel and let it lye.

If Sack want his colour.

First, parel him as you did the *Bastard*, and order him as shall be shewed you for the *white wine* of *Gascoign* with *milk*, and so set him abroach.

For Sack that tawny.

If your *Sack* have a strong Lee or taste, take a good sweet But, fair washed, and draw your *Sack* into it, and make unto it a parel, as you do to the *Bastard*, and beat it very well, and so stop up your But: and if it be tawny, take three gallons of new *milk*, and strain it clean, and put it into your *Sack*, then beat it very well, and stop it close.

For Sack that doth rape and is brown.

Take a fair empty But with the Lees in it, and draw your *Sack* into the same from his Lees fine: then take a pound of *Rice flower*, as fine as you can get, and four grains of *Camphire*, and put it into the *Sack*; and if it will not fine, give it a good parel, and beat it well: then stop it, and let it lye.

To colour sack or any white wine.

If any of your *Sacks* or *white Wines* have lost their colour, take three gallons of new *milk*, and take away the Creame: then over-draw your Wine five or six gallons, then put in your *milk* and beat it; then lay it a fore-taree all night, and in the morning lay it up, and the next day (if you will) you may set it abroach.

If Alligant be drawn hard.

Draw him out in fresh Lee, and take three or four Gallons of *stone-bony* clarified, and being cool, put it in, and parel it, with the yelks of four Eggs, whites and all, and beate it well,

well, and fill it up, and ſtop it cloſe, and it will be pleaſant and quick as long as it is in drawing.

For Alligant that is ſour.

Take three Gallons of white Hony, and two Gallons of Red Wine, boyle them together in a faire pan, and skim it cleane, and let it ſtand till it be fine and cold, then put it into your Pipe, yet nothing but the fineſt; then beat it well, and fill it up, and ſtop it cloſe, and if your Alligant be pleaſant and great, it will doe much good, for that one Pipe will rid away divers.

How to order Rheniſh wines.

There are two ſorts of Rheniſh wines, that is to ſay, *Elſtertune* and *Barabant*: the *Elſtertune* are the beſt, you ſhall know it by the Fat, for it is double bard, and double pinned; the *Barabant* is nothing ſo good, and there is not ſo much good to be done with them as with the other, If the wines be good and pleaſant, a man may rid away a hogſhead or two of white Wine, and this is the moſt vantage a man can have by them: and if it be ſlender and hard, then take three or four gallons of ſtone-honey, and clarifie it clean; then put into the hony, four or five gallons of the ſame Wine, and then let it ſeeth a great while, and put into it two pence in Cloves bruiſed, let them ſeeth together, for it will take away the ſcent of hony, and when it is ſodden take it off, and ſet it by, till it be thorow cold; then take four gallons of milk and order it as before, and then put all into your Wine, and all to beat it; and (if you can) roſe it, for that is the beſt way: then ſtop it cloſe, and let it lye, and that will make it pleaſant.

Of what countries wines are by their names.

The Wines that be made in *Burdeaux* are called *Gaſcoine* Wine, and you ſhall know them by their hazel hoop, and they muſt be full gage, and ſound Wines.

The Wines of the high Countries, and which are called high Country Wines, are made ſome thirty or fourty miles beyond *Bordeaux*, and they come not down ſo ſoon as the other, for if they do, they are all forfeited; and you ſhall know them ever by their hazell hoops, and the length gage lacks.

Then have you Wines that be called *Galloway*, both in Pipes and Hogſheads, and be long, and lack two Ceſterns in gage and a half, and the wines themſelves are high coloured. Then there are other Wines which are called white Wine of *Angulle*,

very

very good Wine, and lacks little of gage, and that is alſo in pipes for the moſt part, and is quarter bound. Then there are *Rochell* wines, which are alſo in pipes long and ſlender: they are very ſmall hedge wines, ſharp in Taſte, and of a pallid complexion. Your beſt Sacks are of *Seres* in *Spain*, your ſmaller of *Galicia* and *Portugall*, your ſtrong Sacks are of the Iſlands of the *Canaries*, and of *Malligo*, and your Muskadine and Malmſeys are of many parts of *Italy*, *Greece*, and ſome ſpeciall Iſlands.

Every Terſe is in depth the middle of the knot in the midſt.

The depth of every Hogſhead is the fourth prick above the knot.

The depth of every Puncheon is the fourth prick next to the punchener.

The depth of every Sack-but is the four pricks next to the puncheon.

Notes of gaging of wines, oyls, and liquors.

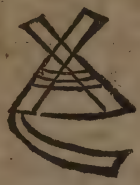
The depth of the half Hogſhead is at the loweſt notch, and accounted one.

The depth of the half Terſe is at the ſecond notch, and is accounted two.

The depth of the half Hogſhead and half Pipe, is at the third notch, and accounted three.

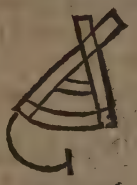
The depth of the halfe-But is at the fourth notch, and is accounted four.

1. *The first gage is marked thus.*



2. *The halfe Sestern lacketh thus.*

3. *The whole Sestern lacketh thus.*



4. *The Sestern and half lag.*

5. *The two Sesterns thus.*

6. *The two and half Sesterns, thus.*

The contents of all manner of Gascoine Wine, and others.

A But of Malmsey, if he be full gage, is one hundred and twenty six gallons.

And so the Tun is two hundred and fifty two gallons. Every Sestern is three gallons.

If you sell for twelve pence a gallon, the Tun is twelve pound, twelve shillings.

And Malmsey and Rhenish wine at ten pence the gallon, is the Tun ten pound.

Eight pence the gallon, is the Tun eight pounds.

Six pence the gallon, is the Tun six pounds.

Five pence the gallon, is the Tun five pounds.

Four pence the Gallon, is the Tun four pounds.

Now for Gascoine Wine, there goeth foure Hogsheads to a Tun, and every Hogshead is sixty three gallons, the two hogsheads one hundred twenty six gallons; and four hogsheads are two hundred fifty two gallons; and if you sell for eight pence the gallon, you shall make of the Tun eight pounds, and so forth: look how many pence the gallons are, and so many pounds the Tun is.

Now for bastard, it is the same rate, but it lacketh of gage two Sesterns and a half, or three at a pipe, and then you must abate six gallons of the price, and so in all other wines.

To chuse Gascoine wines.

See that in your choise of Gascoine wines, you observe, that your Claret wines be faire coloured, and bright as a Ruby, not deep as an Amethyst; for though it may shew strength, yet it wanteth neatnes: also let it be sweet as a Rose or a Violet, and in any case let it be short, for if it be long, then in no case meddle with it.

For your white Wines, see they be sweet and pleasant at the Nose, very short, clear and bright, and quicke in the Taste.

Lastly, for your Red Wine, provided that they be deep coloured, and pleasant, long, and sweet, and if in them or Claret wine be any default of colour, there are remedies enough to amend and repair them.

To remedy Claret wine that hath lost his colour.

If your Claret wine be faint, and have lost his colour; then take a fresh Hogshead with his fresh Lees, which was very good wine, and draw your wine into the same; then stop it

it close and right, and lay it a fore-take for two or three dayes, that the Lees may run through it; then lay it up till it be fine, and if the colour be not perfit, draw it into a Red Wine Hogshead, that is new drawn with the Lees, and that will colour of himself, and make him strong: or take a pound of Turnsoll or two, and beat it with a gallon or two of Wine, and let it lye a day or two; then put it into your Hogshead, draw your Wine again, and wash your cloths; then lay it a fore-take all Night, and roul it on the morrow; then lay it up, and it will have a perfect colour.

And if your Claret Wine have lost his colour, take a penny worth of Damsens, or else black Bullesses, as you see cause, and stew them with some Red wine of the deepest colour, and make thereof a pound or more of syrup, and put it into a clean glasse, and after into the hogshead of Claret wine: and the same you may likewise do unto red Wine if you please.

A remedy for White Wine that hath lost his colour.

And if your white Wine be faint, and have lost his colour, if the Wine have any strength in it, take to a hogshead so much as you intend to put in, out of the said milk, and a handful of Rice beaten very well, and a little Salt; and lay him a fore-take all night, and on the morning lay him up again, and set it abroach in any wise the next Wine you spend, for it will not last long.

For White Wine that hath lost his colour.

Take three Gallons of new Milk, and take away the Cream off it; then draw five or six gallons of Wine, and put your milk into the hogshead, and beat it exceeding well, then fill it up, but before you fill it up, if you can roul it; and if it be long and small, take half a pound of Roch Allum finely beaten into powder, and put it into the vessel, and let it lye.

A remedy for Claret that drinks foul.

Take and draw it into new Lees of the own nature, and then take a dozen of new Pippins, and pare them and take away the cores, and then put them in; and if that will not serve, take a handful of the Oake of Jerusalem, and stamp it, then put it into your Wine, and beat it exceeding well, and it will not only take away the foulness, but also make it have a good scent at the Nose.

If your red Wine drink faint, then take a hogshead that Allegant hath been in with the Lees also, and draw your Wine

into it, and that will refresh it well, and make the Wine well colcured; or otherwise draw it close to fresh lees, and that will recover it again, and put to it three or four gallons of Allegant, and turn it on his lees.

If your Red Wine lack colour, then take out four gallons, and put in four gallons of Allegant, and turn him on his lees, and the bung up, and his colour will return and be fair.

Take a good Butt of Malmsey, and over-draw it a quarter or more, and fill him up with fat Bastard, and with Cute a gallon and more, then parrell him as you did your Malmsey.

If *Ossey* compleat hath lost his colour.

You shall in all points dress him, as you did dress your Sack, or White Wine in the like case, and parrel him, and then set him abroach. And thus much touching Wines of all sorts, and the true use and ordering of them so far forth as belongeth to the knowledg and profit of our English House-wife.

CHAP. V.

Of Wooll, Hemp, Flax, and Cloth, and dying of Colours, of each severall substance, with all the knowledges belonging thereto.

OUr English House-wife, after her knowledge of preserving and feeding her Family, must learn also how, out of her own endeavours, she ought to cloath them outwardly and inwardly: outwardly for defence from the cold and comelines to the person; and inwardly, for cleanlines and neatnesse of the skin, whereby it may be kept from the filth of sweat or vermine; the first consisting of woollen cloth, the later of of linnen.

Of making woollen cloth.

To speak then first of the making of woollen cloth, it is the office of a Husbandman at the sheering of his sheep, to bestow upon the House-wife such a competent proportion of Wooll, as shall be convenient for the clothing of his Family, which Wooll as soon as she hath received it, she shall open, and with a pair of sheers (the fleece lying as it were whole before her) she shall

ſhall cut away all the courſe locks, pitch, brands, tard-locks, and other feltrings, and lay them by themſelves for courſe Coverlids, or the like; then the reſt ſo cleanſed, ſhe ſhall break into pieces, and toaſe it every lock by lock, that is, with her hands open, and ſo divide the wooll, as not any part thereof may be feltred or cloſe together, but all open and looſe; then ſo much of the Wooll as ſhe intends to ſpin white, ſhe ſhall put by it ſelf, and the reſt which ſhe intends to put into colours, ſhe ſhall weigh up, and divide into ſeveral quantities, according to the proportion of the web which ſhe intends to make, and put every one of them into particular bags made of Netting, with tallies, or little pieces of wood fixed unto them, with privy marks thereon, both for the weight, the colour, and the knowledge of the ſame Wooll, when the firſt colour is altered: This done, ſhe ſhall if ſhe pleaſe ſend them unto the Dyers, to be died after her own fancy; yet foraſmuch as I would not have our Engliſh Houſe-Wife ignorant in any thing meet for her knowledg, I will ſhew her here, before I proceed any further, how ſhe ſhall dye her Wooll her ſelf, into any colour meet for her uſe.

To dye wooll black.

Firſt then to dye wooll black, you ſhall take two pound of Galls, and bruiſe them; then take half ſo much of the beſt green Copperas, and boyl them both together in two gallons of running water: then ſhall you put your wooll therein, and boyl it; ſo done, take it forth and dry it.

To dye wooll of a hair-colour.

If you will dye your wooll of a bright hair colour; firſt boyl your wooll in Allum and Water, then take it forth, and when it is cold, take Chamber-lye, and Chimney-ſoot, and mixing them together well, boyl your wooll again therein, and ſtirre it exceeding well about, then take it forth, and lay it where it may conveniently dry.

To dye wooll red.

If you will dye your wooll into a perfect Red colour, ſet on a pan full of water; when it is hot, put in a peck of Wheat bran, and let it boyl a little, then put it into a Tub, and put twice as much cold water unto it, and let it ſtand untill it be a Week old: having done ſo, then ſhall you put to ten pounds of wooll, a pound of Allum; then heat your Liquor again, and put in your Allum, and ſo ſoon as it is melted, put in your Wooll,

and let it boyl the space of an hour; Then take it again, and set on more bran and water.

Then take a pound of Madder, and put in your Madder when the Liquor is hot; when the Madder is broken, put in the wooll and open it, and when it cometh to be very hot, then stir it with a staff, and then take it out, and wash it with fair water; then set on the pan again with fair water, and then take a pound of Saradine buck, and put it therein, and let it boyl the space of an Egg seething; then put in the wooll, and stir it three or four times about, and open it well, and after dry it.

To dye wooll blew.

To die wooll blew, take good store of old Chamber-lye, and set it on the fire, then take half a pound of blew Neal, Byse or Indico, and beat it small in a Mortar, and then put it into the Lye, and when it seeths put in your wooll.

To dye a Puke.

To die wooll of a Puke colour, take Galls, and beat them very small in a Mortar, put them into fair seething water, and boyl your Wooll or your Cloth therein, and boyl them the space of half an hour; then take them up, and put in your Copperas into the same Liquor, then put in your wooll again; and doing this once or twice, it will be sufficient.

To dye a Cinder colour.

And if you will die your wooll of a Cinder colour, which is a very good colour, you shall put your Red wooll into your puke Liquor; and then it will fail less to be of a Cinder colour.

To dye green or yellow.

If you will dye your wooll either green or yellow, then boyl your Wood-ward in a fair water, then put in your Wooll or Cloth, and the wooll which you put in white, will be yellow, and that wooll which you put in blew, will be green, and all this with one Liquor: provided, that each be first boyled in Allom.

When you have thus dyed your wooll, into those several colours, meet for your purpose, and have also dryed it well; then you shall take it forth, and toase it over again as you did before: for the first toasing was to make it receive the colour or dye: this second is to receive the oyl, and make it fit for spinning; which as soon as you have done, you shall mixe your colours together: wherein you are to note, that the best medly is that which is com-

compounded of two colours onely, as a light colour and a dark: for to have more is but confuſion, and breeds no pleaſure but diſtraction to the ſight: therefore for the proportion of your mixtures, you ſhall ever take two parts of the darker colour, and but a third part of the light. As for example, your web contains twelve pound, and the colours are red and green: you ſhall then take eight pound of the green wooll, and but four pound of the red; and ſo of any other colours where there is difference in brightneſs. Mixing of three colours.

But if it be ſo that you would needs have your cloth of three Colours, as of two dark and one light, or two light and one dark: As thus, you will have Crimſon, Yellow, and Puke: you ſhall take of the Crimſon and Yellow, of each two pounds, and of the the Puke eight pounds: for this is two light colours to one dark: but if you will take a Puke, a Green and an Orange Tawny, which is two dark, and one light; then you ſhall take of the Puke and green, and the Orange tawny, of each alike quantity; that is to ſay, of either four pounds. When you have equally divided your portions, then you ſhall ſpread upon the ground a ſheet, and upon the ſame firſt lay a thin layr or bed of your darker colour, all of one even thickneſs, then upon the ſame layr, lay another much thinner of the brighter quantity, being ſo near as you gueſs it, hardly half ſo much as the darker; then cover it over with another layr of the ſad colour or colours again; then upon it another of the bright again: And thus lay layr upon layr till all your wooll be ſpread; then beginning at one end to roul up round and hard together the whole bed of wooll; and then cauſing one to kneel hard upon the roul, that it may not ſtirre nor open, with your hands touze and pull out all the wooll in ſmall pieces: And then taking a pair of Stock cards ſharp and large, and bound faſt to a form, or ſuch like thing; and on the ſame, Comb and Card all over the Wooll, till you ſee it perfectly and undiſtinctly mixed together, and that indeed it is become one entire colour of divers, without ſpots, or undivided locks or knots; in which doing you ſhall be very careful and heedful with your eye; and if you find any hard knot or other felter in the Wooll, which The mixing of colours.

which will not open, though it be never so small, yet you shall pick it out, and open it, or else being any other fault, cast it away; for it is the greatest Art in House-wifery to mix these Woolls aright, and to make the Cloth without blemish.

Of the oyling of wooll.

Your Wooll being thus mixed perfectly together, you shall then oyl it, or as the plain House-wife terms it, grease it, in this manner; being laid in a round flat bed, you shall take of the best Rape Oyl, or for want thereof, either well clarified Goose-grease, or Swines-grease, and having melted it, with your hand sprinkle it all over your wool, and work it very well into the same; then turn your wooll about, and do as much on the other side, till you have oyled all the Wooll over, and that there is not a lock which is not moystned with the same.

The quantity of Oyl.

Now for as much as if you shall put too much oyl upon the Wool, you may thereby do great hurt to the Web, and make that the thred will not draw, but fall into many pieces, you shall therefore be sure at the first to give it little enough; and taking some thereof, prove it upon the Wheel: And if you see it draw dry, and breaketh, then you may put more Oyl unto it; but if it draw well, then to keep it there without any alteration. But because you shall be a little more certain in the truth of your proportions, you shall know, that three pounds of Grease or Oyl will sufficiently anoint or grease ten pounds of Wooll; and so according to that proportion, you may oyl what quantity you will.

Of tumming wooll.

After your Wooll is oyl'd and anointed thus, you shall then tum it; which is, you shall put it forth as you did before when you mixed it, and card it over again upon your Stock cards: and then those Cardings which you strike off, are called tummings, which you shall lay by, till it come to a spinning. There be some House-wifes which oyl it as they mixe it, and sprinkle every layr as they lay it, and work the Oyl into it; and then rouling it up as before said, pull it out and tum it; so that then it goeth but once over the Stock-Cards, which is not amiss; yet the other is more certain, though somewhat painful.

After

After your Wooll is thus mixed, oyled and tummed, you ſhall then ſpin it upon great Wooll-wheels, according to the order of good Houſe-wifery: the actions whereof muſt be got by practice, and not relation; onely this, you ſhall be careful to draw your thred according to the nature and goodneſs of your Wooll, not according to your particular deſire; for if you draw a fine thred from a wooll which is of a courſe ſtaple, it will want ſubſtance when it comes to the Walk Mill, or either there beat in pieces, or not being able to bed, and cover the threds well, be a cloth of a very ſhort laſting. So likewiſe if you draw a courſe thred from a Wooll of a fine ſtaple, it will then ſo much overthick, that you muſt either take away a great part of the ſubſtance of your wooll in flocks; or elſe let the cloth wear courſe and high, to the diſgrace of good Houſe-wifery, and loſſe of much cloth, which elſe might have been ſaved. Of ſpinning wooll.

Now for the diverſities of ſpinning, although our ordinary Engliſh Houſe-wife make none at all, but ſpin every thred alike, yet the better experienc'd make two manner of ſpinnings, and two ſorts of thread; the one they call Warp, the other Weft, or elſe Wooffe; Warp is ſpun cloſe, round and hard twiſted, being ſtrong and well ſmoothed, becauſe it runs through the ſleies, and alſo endureth the fretting and beating of the Beam; The Weft is ſpun open, looſe, hollow, and but half twiſted; neither ſmoothed with the hand, nor made of any great ſtrength, becauſe it only croſſeth the warp, without any violent ſtraining, and by reaſon of the ſoftneſſe thereof beddeth cloſer, and covereth the warp ſo well, that a very little beating in the Mill bringeth it to a perfect cloth: and though ſome hold it leſs ſubſtantial than the web, which is all of twiſted yarn, yet experience finds they are deceived, and that this open weft keeps the cloth longer from fretting and wearing. The diverſities of Spinning.

After the ſpinning of your wooll, ſome Houſe-wifes uſe to wind it from the broch into round clews for more eaſe in the warping, but it is a labour may very well be ſaved, and you may as well warp it from the broch as from the clew, as long as you know the certain weight, for by that only you are to be directed in all manner of Cloth walking. Winding of woollen yarn.

Now

Of Warping cloth.

Now as touching the warping of Cloth, which is both the skill and action of the Weaver, yet must not our English House-wife be ignorant therein, but though the doing of the thing be not proper unto her, yet what is done must not be beyond her Knowledg, both to bridle the falshood of unconscionable Workmen, and for her own satisfaction, when she is rid of the doubt of anothers evil doing. It is necessary then that she first cast, by the weight of her wooll, to know to how many yards of Cloth the Web will arise: for if the Wooll be of a reasonable good staple, and well spun, it will run yard and pound; but if it be course, it will not run so much.

Now in your warping also, you must look how many pounds you lay in your warp, and so many you must necessarily preserve for your weft: For House-wifes say, the best Cloth is made of even and even; for to drive it to greater advantage is hurtfull to the cloth. There be other observations in the warping of cloth; as to number your Portusses, and how many goes to a yard: to look to the closeness and filling of the sleie, and such like, which sometimes hold, and sometimes fail, according to the art of the Workman; and therefore I will not stand much upon them, but refer the House-wife to the instruction of her own experience.

Of weaving of Cloth, walking and dressing it.

Now after your Cloth is thus warped, and delivered up into the hands of the Weaver, the House-wife hath finisht her labour; for in the Weaving, walking, and dressing thereof, she can challenge no property more than to entreat them severally to discharge their duties with a good conscience; that is to say, that the Weaver weave close, strong and true, that the Walker or Fuller mill it carefully, and look well to his scowring Earth, for fear of beating holes into the cloth; and that the Cloth-worker or Sheer-man burle and dress it sufficiently, neither cutting the Wooll too unreasonable high, whereby the cloth may not wear rough, nor too low, lest it appear thred-bare ere it come out of the hands of the Taylor.

Of linnen cloth.

These things fore-warn'd and performed, the cloth is then to be used at your pleasure.

The next thing to this, which our English House-wife must be

be skilful in, is the making of all sorts of Linnen Cloth, whether it be of Hemp or Flaxe; for from those two onely is the most principal Cloth derived and made, both in this and in other Nations.

The ground best to sow Hemp on.

And first touching the Soyl fittest to sow Hemp upon, it must be a rich mingled Earth of Clay and Sand, or Clay and Gravel well tempered; and of these the best serveth best for that purpose; for the simple Clay, or the simple Sand are nothing so good; for the first is too tough, too rich, and too heavy, bringeth forth all Bun, and no Rind; the other is too barren, too hot, and too light, and bringeth forth such slender withered encrease, that it is nothing near worth the labour. Briefly then, the best Earth is the mixt ground, which the Husbandman calls the Red hazel ground, being well ordered and manur'd; and of this Earth a principal place to sow Hemp on, is in old Stack-yards, or other places kept in the Winter time for the lair of Sheep or Cattel, when your ground is either scarce, or formerly not imployed to that purpose; but if it be where the ground is plenty, and onely used thereunto, as in *Holland* in *Lincolnshire*, the Isle of *Axolm*, and such like places, then the Custome of the Country will make you expert enough therein: There be some that will preserve the ends of their Corn-Lands, which butt upon grass, to sow Hemp or Flax thereon, and for that purpose will manure it well with sheep; for whereas Corn which butteth on grass hads, where Cattel are teathered, is commonly destroyed, and no profit issuing from a good part thereof; by this means, that which is sown will be more safe and plentiful, and that which was destroyed, will beat a commodity of better value.

The tillage of the ground.

Now for the Tillage or ordering of the ground where you sow Hemp or Flax, it would in all points be like that where you sow Barley, or at the least as often broke up, as you do when you sow Fallow Wheat; which is thrice at least, except it be some very mellow and ripe mould, as Stack-yards, and usual Hemp Lands be, and then twice breaking up is sufficient: that is to say, about the later end of *February*, and the later end of *April*, at which time you shall sow it: and

herein it is to be noted, That you must sow it reasonable thick with good, sound and perfect seed, of which the smoothest, roundest, and brightest, with least dust in it, is best: you must not lay it too deep in the earth; but you must cover it close, light, and with so fine a mould as you can possible break with your harrows, clotting beetles, or sleighting: then till you see it appear above the Earth, you must have it exceedingly carefully tended, especially an hour or two before the Sun rise, and as much before it sets; for birds and other vermine will otherwise pick the seed out of the earth, and so deceive you of your profit.

Of weeding of Hemp and Flax.

Now for the weeding of Hemp, you may save the labour, because it is naturally of it self swift of growth, rough, and venemous to any thing that grows under it, and will sooner of its own accord destroy those unwholsome weeds, than by your labour. But for your Flax or Line, which is a great deal more tender, and of harder encrease, you shall as occasion serveth weed it, and trim it, especally if the weeds over-grow it, but not otherwise: for if it once get above the weeds, then it will save it self.

The pulling of Hemp or Flax.

Touching the pulling of Hemp, or Flax, which is the manner of gathering of the same; you shall understand that it must be pulled up by the roots, and not cut as Corn is, either with sithe or hook; and the best time for the pulling of the same is, when you see the leaves fall downward, or turn yellow at the tops, for that is full ripe; and this for the most part will be in *July*, and about *Mary Mandlins* day. I speak now touching the pulling of Hemp for cloth: but if you intend to save any for seed, then you shall save the principal buns, and let them stand till it be the later end of *August*, or sometime till mid *September* following; and then seeing the seed turned brown and hard, you may gather it, for if it stand longer, it will shed sufficiently; as for Flax, which ripeneth a little after the Hemp, you shall pull it as soon as you see the seed turn brown, and bend the head to the Earth-ward, for it will afterward ripen of it self as the bun dryeth.

Now for the ripening and seasoning of Hemp or Flax, you shall

ſhall ſo ſoon as you have pulled it, lay it all along flat, and thinne upon the ground, for a day and a night at the moſt, and no more; and then as the Houſe-wifes call it, tye it up in baits, and rear them upright till you can conveniently carry it to the water, which would be done as ſpeedily as may be. Now there be ſome which do ripen their Hemp and Flaxe upon the ground where it grew, by letting it lye thereon to receive dews and rain, and the moiſtneſs of the earth, till it be ripe: but this is a vile and naughty way of ripening, it maketh the Hemp or Flax black, rough, and often rotten: therefore I would wiſh none to uſe it, but ſuch as neceſſity compelleth thereunto, and then to be careful to the often turning thereof, for it is the ground onely which rots it.

The watering of Hemp or Flax.

Now for the watering of the Hemp or Flax, the beſt Water is the running ſtream, and the worſt the ſtanding pit, yet becauſe Hemp is a poyſonous thing, and infecteth the Water, and deſtroyeth all kind of fiſh, it is more fit to imploy ſuch pits and ditches as are leaſt ſubject to annoyance, except you live near ſome great, broad and ſwift ſtreams, and then in the ſhallow parts thereof you may water without danger. Touching the manner of the watering thereof, you ſhall according to the quantity knock four or ſix ſtrong Stakes into the bottome of the water, and ſet them ſquare-wiſe, then lay your round baits or bundles of Hemp down under the water, the thick end of your bundle one way, and the thick end of another bundle another way; and ſo lay bait upon bait, till you have laid in all, and that the water covereth them all over; then you ſhall take over-lyers of Wood, and binding them over-thwart to the ſtakes, keep the Hemp down cloſe, and eſpecially at the four corners; then take great ſtones, gravel, and other heavy rubbiſh, and lay it between, and over the over-lyers, and ſo cover the Hemp cloſe, that it may by no means ſtir, and ſo let it continue in the water four dayes and nights; if it be in a running water; but if it be in a ſtanding water, then longer, and then take out one of the uppermoſt baits and waſh it; and if in the waſhing you ſee the leaf come off, then you may be aſſured the Hemp is watered enough: as for Flax, leſs time will ſerve it, and it will ſhed the leaf in three nights.

Of washing out of Hemp or Flax.

When your Hemp or Flax is thus watered enough, you shall take off the gravel, stones, over-lyers of Wood, and unlooshing it from the stakes, take and wash out every bait or bundle severally by it self, and rub it exceeding clean, leaving not a leaf upon it, nor any filth within it; then set it upon the dry earth upright, that the water may drop from it; which done, load it up, and carry it home; and in some open close, or piece of ground rear it upright, either against hedges, pales, walls, back-sides of houses, or such like, where it may have the full strength or reflection of the Sun, and being throughly dryed then house it; yet there be some House-wifes which as soon as their Hemp comes from the water, will not rear it upright, but lay it upon the ground flat and thin for the space of a sennight, turning it at the end of every two dayes, first on the one side, then on the other, and then after rear it upright, dry it, and so house it: and this Housewifery is good and orderly.

Now although I have hitherto joyned Hemp and Flax together, yet you shall understand that there are some particular differences between them; for whereas your Hemp may within a night or two after the pulling, be carried to the water, your Flax may not but must be reared up, and dryed and withered a week or more to ripen the seed; which done, you must take ripple combs, and ripple your flax over, which is the beating or breaking off from the stalks the round bells or bobs which contain the seed, which you must preserve in some dry vessel or place till the Spring of the year, and then beat it, or thresh it for your use, and when your flaxe or line is ripled, then you must send it to the water as aforesaid.

After your Hemp or Flax hath been watered, dryed, and housed, you may then at your pleasure break it, which is in a brake of wood (whose proportion is so ordinary, that every one almost knowes them) then break and beat out the dry bun or hexe of the Hemp or Flax from the rind which covers it, and when you brake either, you shall do it as near as you can, on a fair, dry, Sun-shine day, observing to set forth your Hemp and Flax, and spread it thin before the Sun, that it may be as dry as tinder before it come to the brake; for if either in the lying close together,

ther, it shall give again or sweat, or through the moystnes of the ayr, or place where it lyes, receives any dampishnes; you must necessarily receive it dryed sufficiently again, or else it will never brake well, nor the bun break and fall from the rinde in order as it should.

The drying of Hemp or Flax.

Therefore, if the weather be not seasonable, and your need much to use your Hemp or Flaxe, you shall then spread it upon your Kilne, and making a soft fire under it, dry it upon the same, and then brake it: yet for as much as this is oft-times dangerous, and much hurt hath been received thereby through casualty of fire, I would wish you to stick four Stakes in the Earth at least five foot above ground, and laying over them small over-layers of Wood, and open fleaks or hurdles upon the same; spread your Hemp, and also rear some round about it all, but at one open side; then with straw, small shavings, or other light dry wood make a soft fire under the same, and so dry it, and brake it, and this without all danger or mistrust of evil; and as you brake it, you shall open and look into it, ever beginning to break the root ends first; and when you see the bun is sufficiently crusht, fallen away, or at the most hangeth but in very small shivers within the Hemp or Flax, then you shall say, it is brak't enough; and then terming that which you called a Baite or Bundle before, now a strike, you shall lay them together, and so house them, keeping in your memory either by score or writing, how many strikes of Hemp, and how many strikes of Flaxe you brake up every day.

Diversity of brakes.

Now that your Hemp or Flax may brake so much the better, you must have for each several sort two several brakes, which is an open and wide toothed, or nickt brake, and a close and straight toothed brake: the first being to crush the bun, and the later to beat it forth. Now for Flax, you must take first that which is the straighter for the Hemp, and then after, one of purpose, much straighter and sharper; for the bun of it being more small, tough, and thin, must necessarily be broken into much less pieces.

After your Hemp and Flax is brak't, you shall then swingle it, which is upon a swingle-tree block, made of an half inch boord

boord about four foot above ground, and set upon a strong foot or stock, that will not easily move and stir, as you may see in any House-wives house whatsoever, better than my words can expresse: and with a piece of Wood called the Swingle-tree dagger, made in the shape and proportion of an old dagger, with a reasonable blunt edge; you shall beat out all the loose buns and shivers that hang in the Hemp or Flaxe, opening and turning it from one end to the other, till you have no bun or shiver to be perceived therein, and then striking a twist, and fould in the midst, which is ever the thickest part of the strike, lay them by till you have swingled all; the general profit whereof, is not only the beating out of the hard bun, but also an opening and softning of the tear, whereby it is prepared and made ready for the Market.

Now after you have swingled your Hemp and Flaxe over once, you shall take and shape up the refuse stuffe which you beat from the same severally, and not only it, but the tops and knots, and half brackt bun, which fall from the brake also; and drying them again, cause them to be very well thresht with flayls, and then mixing them with the refuse which fell from the swingle tree, dress them all well with threshing and shaking, till the buns be clean driven out of them; and then lay them in some safe dry place till occasion of use; these are called swingle-tree hurds, and that which comes from the Hemp will make window-cloth, and such like course stuffe, and that which comes from the flaxe, being a little towed again in a pair of Wooll-Cards, will make a course harding.

But to proceed forward in the making of Cloth, after your Hemp or Flax hath been swingled once over, which is sufficient for the Market, and for ordinary sale; you shall then for Cloth, swingle it over the second time, and as the first did beat away the bun, and soften the rind, so this shall break and divide, and prepare it fit for the heckle; and hurds which are this second time beaten off, you shall also save: for that of the Hemp, (being toased in Wooll-Cards) will make a good hempen harding, and that which cometh from the flaxe (used in that manner) a flaxe harding, better than the former.

Of beating Hemp.

After the second swingling of your Hemp, and that the hurds there-

thereof have been laid by, you shall take the strikes, and dividing them into dozens, and half dozens, make them up into great, thick roules, and then as it were broaching them, or spitting them upon long sticks, set them in the corner of some Chimney, where they may receive the heat of the fire, and there let them abide, till they be dried exceedingly; then take them, and laying them in a round trough made for the purpose, so many as may conveniently lye therein, and there with beetles beat them exceedingly, till they handle both without and within as soft and pliant as may be, without any hardness or roughness to be felt or perceived; then take them from the trough and open the rouler, and divide the strikes severally as at the first, and if any be insufficiently beaten, roul them up, and beat them over as before.

Of heckling Hemp.

When your Hemp hath been twice swingled, dryed and beaten, you shall then bring it to the heckle, which instrument needeth no demonstration, because it is hardly unknown to any woman whatsoever: and the first heckle shall be course open and wide toothed, because it is the first breaker or divider of the same, and the layer of the strikes even and straight: and the hurds which come of this heckling, you shall mike with those of the later swingling, and it will make the cloth much better; then you shall heckle it the second time through a good straight heckle, made purposely for Hemp, and be sure to break it very well, and sufficiently thereupon, and save both the hurds by themselves, and the strikes by themselves in several places.

Now there be some very principal good House-wives, which use only but to heckle their Hemp once over, affirming, that if it be sufficiently dryed and beaten, that once going over through a straight heckle, will serve without more loss of labour, having been twice swingled before.

Now if you intend to have an excellent piece of Hempen cloth, which shall equal a piece of very pure Linnen; then after you have beaten it, as before said, and heckled it once over, you shall then roul it up again, dry it as before, and beat it again as much as at the first; then heckle it through a fine flaxen heckle, and the Towe which falls from the heckle, will make a principal hemping, but the teare it self a Cloth as pure, as fine *House-wifes* Linnen, the indurance and lasting whereof, is rare and wonderful.

ful: thus you see the uttermost art in dressing of Hemp, for each several purpose in cloth-making, till it come to the spinning.

The dressing of Flax to the finest use.

Flaxe after it hath been twice swingled, needeth neither more drying nor beating than Hemp doth, but may be brought to the heckle in the same manner as you did Hemp; onely the heckle must be much finer and straighter; and as you did before, the first heckle being much courser than the later, holding the strike stiffe in your hand, break it very well upon that heckle: then the hurdes which comes thereof, you shall save to make fine hurden Cloth of, and the strike it self you shall passe thorow a finer heckle; and the hurds which come from thence, you shall save to make fine midling Cloth of, and the tear it self for the best Linnen.

To dress Flax for the finest use that may be, as to make fair Holland cloth of great price, or thred for the most curious purpose, a secret hitherto almost concealed from the best *Housewifes* with us; you shall take your flax after it hath been handled, as is before shewed, and laying three strikes together, plat them in a plat of three, so hard and close together as is possible, joyning one to the end of another, till you have platted so much as you think convenient, and then begin another platt; and thus plat as many several plats as you think will make a roul, like unto one of your hemp rouls before spoke of, and then wreathing them hard together, make up the roul; and so many rouls more or less, according to the purpose you dress them for: this done, put the rouls into a Hemp-trough, and beat them soundly, rather more than lesse than the Hemp; and then open and unplat it, and divide every strike from the other very carefully; then heckle it through a finer heckle than any formerly used: for of heckles there be ever three sorts, and this must be the finest: and in this heckling, you must be exceeding careful to do it gently, lightly, and with good deliberation, lest what you heckle from it should run to knots, or other hardness, as it is apt to do: but being done artificially as it ought, you shall see it look, and feel it handle like fine soft Cotton, or Jersie Woolł; and this which thus looketh and feeleth, and falleth from the heckle, will notwithstanding make a pure Linnen, and run at least

leaſt two yards and a half in the pound; but the teare it ſelf will make a perfect ſtrong, and moſt fine Holland, running at leaſt five yards in the pound.

After your teare is thus dreſt, you ſhall ſpin it either upon a Wheel or Rock, but the wheel is the ſwifter way, and the Rock maketh the finer thread; you ſhall draw your thread according to the nature of the teare, and as long as it is even, it cannot be too ſmall, but if it be uneven, it will never make a durable Cloth. Now for as much as every Houſe-wife is not able to ſpin her own teare in her own houſe, you ſhall make choice of the beſt Spinners you can hear of, and to them put forth your teare to ſpin, weighing it before it go, and weighing it after it is ſpun and dry, allowing weight for weight, or an ounce and an half for waſte at the moſt: as for the prices for ſpinning, they are according to the natures of the Countrey, the fineneſs of the tear, and the dearneſs of proviſions: ſome ſpinning by the pound, ſome by the lay, and ſome by the day, as the bargain ſhall be made.

Of reeling of Yarn.

After your Yarn is ſpun upon Spindles, Spools, or ſuch like, you ſhall then reel it upon Reels, of which the Reels which are hardly two foot in length, and have but only two contrary croſs bars, are the beſt and moſt eaſie, and leſs to be troubled with ravelling, and in the weaving of your fine Yarn, to keep it the better from ravelling, you ſhall as you reel it, with a Ley-band of a big twiſt, divide the ſlipping or skean into divers Leyes, allowing to every Ley eighty threads, and twenty Leyes to every ſlipping, the Yarn being very fine, otherwiſe leſs of both kinds: but if they ſpin for you by the Ley, as at a pound of Ley or ſo, then the antient cuſtome hath been to allow to the Reel which was eight yards, at above 160 threads to every Ley, and 25. Leyes, and ſometimes 30. Leyes to a ſlipping, which will ordinarily amount to a pound or thereabouts; and ſo by that you may proportion forth the price for any manner of ſpinning whatſoever; for if the beſt thus, then the ſecond ſo much abated, and ſo accordingly the worſt.

Of the ſcouring of Yarn.

After thus your Yarn is ſpun and reel'd, being in the ſlippings you ſhall ſcour it: Therefore, firſt to fetch out the ſpots, you ſhall lay it in luke-warm water, and let it lie ſo three or

four dayes, each day shifting it once, and wringing it out, and laying it in another water of the same nature; then carry it to a well or brook, and there rinse it, till you see that nothing cometh from it, but pure clean water; for whilest there is any filth within it, there will never be white cloth; which done, take a bucking-tub, and cover the bottome thereof with very fine Ashen-ashes: then opening your slippings, and spreading them, lay them on those Ashes, then cover those slippings with Ashes again, then lay in more slippings, and cover them with Ashes as before, and thus lay one upon another, till all your Yarn be laid in; then cover the uppermost Yarn with a bucking-cloth, and lay therein a peck or two (according to the bigness of the tub) of ashes more, then pour into all through the uppermost cloth so much warm water, till the Tub can receive no more; and so let it stand all night, the next morning you shall set a Kettle of clean water on the fire; and when it is warm, you shall pull out the spigget of the bucking-tub, and let the water therein run into another clean Vessel; and as the bucking-tub wasteth, so you shall fill it up again with the warm water on the fire, and as the water on the fire wasteth, so you shall fill it up again with the lye which cometh from the bucking-tub, ever observing to make the lye hotter and hotter till it seeth; and then when it so seetheth, you shall as before apply it with the boyling lye, at least four hours together, which is called, the driving of a Buck of Yarn: All which being done, you shall take off the Bucking-cloth, and then putting the Yarn with the Lye-ashes into large Tubs or Bowls, with your hands as hot as you can suffer it to pos, and labour the Yarn, Ashes, and Lie, a pretty while together: then carry it to a Well, River, or other clean scouring-water, and there rinse it as clean as may be from the Ashes; then take it, and hang it upon poles abroad in the aire all day, and at night take the slippings down, and lay them in water all night, then the next day hang them up again, and if any part of them dry, then cast water upon them, observing ever to turn that side outmost which whiteth slowest, and thus do at least seven dayes together; then put all the Yarn again into a Bucking-tub without ashes, and cover

Whiting of Yarn.

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it as before with a Bucking-cloth, and lay thereupon good ſtore of freſh aſhes, and drive that Buck as you did before, with very ſtrong ſeething Lies, the ſpace of half a day or more; then take it forth, poſſe it, rinſe it, and hang it up as you did before on the dayes, and laying it in water on the nights another week, and then waſh it over in fair water, and ſo dry it up.

Otherwayes there are of ſcouring and whiting of Yarn; as ſteeping it in bran and warm water, and then boyling it with *Ozier* ſticks, Wheat-ſtraw, water, and aſhes, and then poſſing, rinſing, and bleaching it upon hedges, or buſhes; but it is a foul and uncertain way, and I would not wiſh any good *Houſe-wife* to uſe it.

After your Yarn is ſcoured and whited, you ſhall then wind it up into round balls of a reaſonable bigneſs, rather without bottoms then with any at all, becauſe it may deceive you in the weight; for according to the pounds will ariſe your Yards and Lengths of Cloth.

After your Yarn is wound and weighed, you ſhall carry it to the Weavers, and warp it as was before ſhewed for Woollen Cloth, knowing this, that if your Weaver be honeſt and skilfull, he will make you good and perfect Cloth of even and even, that is juſt the ſame weight in weft, that there was in warp: As for the action of Weaving it ſelf, it is the Work-man's Occupation, and therefore to him I refer it.

The ſcouring and whiting of Cloth.

After your Cloth is woven and the Web or Webs come home, you ſhall firſt lay it to ſteep in all points as you did your Yarn, to fetch out ſoyling and other filth, which is gathered from the Weaver; then rinſe it alſo as you did your Yarn, then Buck it alſo in Lie and Aſhes, as before ſaid, and rinſe it, and then having Loops fixt to the ſelvedge of the Cloth, ſpread it upon the graſs, and ſtake it down at the uttermoſt length and bredth, and as faſt as it dries, water it again, but take heed you wet it not too much, for fear you mildew or rot it; neither caſt water upon it, till you ſee it in a manner dry, and be ſure weekly to turn it firſt on one ſide, and then on the other, and at the end of the firſt week, you ſhall Buck it as before in Lie and Aſhes again, then rinſe it, ſpread it, and water it as before; then if you ſee it whites apace, you need not give it any more Bucks with

the Ashes and the Cloth mixt together, but then a couple of clean Bucks, (as was before shewed in the Yarn) the next fortnight following; and then being whitened enough, dry up the Cloth and use it as occasion shall require: the best season for the same whitening, being *April* and *May*. Now the course and worst House-wives, scour and white their Cloth with Water and Bran, and Buck it with Lie and green Hemlocks: but, as before I said, it is not good, neither would I have it put in practice. And thus much for Wool, Hemp, Flax, and Cloth of each several substance.

CHAP. VI.

Of Dairies, Butter, Cheese, and the necessary things belonging to that Office.

THere followeth now in this place after these Knowledges already rehearsed, the ordering and Government of Dairies, with the profits and commodities belonging to the same. And first touching the stock wherewith to furnish Dairies, it is to be understood, that they must be Kine of the best choice and breed that our *English House-wife* can possibly attain unto, as of big bone, fair shape, right bred, and deep of Milk, gentle, and kindly.

Bigness of Kine.

Touching the bigness of bone, the larger that every Cow is, the better she is: for when either age or mischance shall disable her for the Pail, being of large bone she may be fed, and made fit for the shambles, and so no loss but profit, and another to the Pail, as good and sufficient as her self.

For her shape, it must a little differ from the Butchers rules; for being chose for the Dairy, she must have all the signs of plenty of Milk; as a crumpled horn, thin neck, a hairy dewlap, and a very large Udder, with four Teats, long, thick, and sharp at the ends; for the most part either all white, of what colour soever the Cow be, or at least the fore-part thereof: and if it be well hair'd before and behind, and smooth in the bottom, it is a good sign.

The breed of Kine.

As touching the right breed of Kine through our Nation, it

it generally affordeth very good ones, yet ſome Countries do far exceed other Countries, as *Cheſhire*, *Lancaſhire*, *York-ſhire* and *Darby-ſhire* for black Kine; *Glouceſter-ſhire*, *Somerſet-ſhire*, and ſome part of *Wiltſhire* for red Kine; and *Lincoln-ſhire* for pide Kine: and from the breeds of theſe Countries generally do proceed the breeds of all other, howſoever diſperſed over the whole Kingdom. Now for our Houſewifes directions, ſhe ſhall chuſe her *Dairy* from any of the beſt breeds before named, *according as her opinion and delight ſhall govern her*, only obſerving not to mix her breeds of divers kinds, but to have all of one intire choice without variation, becauſe it is unprofitable; neither muſt you by any means have your Bull a foreiner from your Kine, but either of one Countrey, or of one ſhape and colour: Again, in the choice of your Kine, you muſt look diligently to the goodneſs and fertility of the ſoyl wherein you live, and by all means buy no Kine from a place that is more fruitfull than your own, but rather harder; for the later will proſper and come on, the other will decay and fall into diſeaſes; as the piſſing of blood and ſuch like. For which diſeaſe, and all other, you may find aſſured cures in the former Book called *Cheap and good.*

Depth of milk in Kine.

For the depth of milk in Kine (which is the giving of moſt milk) being the main of a Houſewifes profit, ſhe ſhall be very carefull to have that quality in her Beaſts. Now thoſe Kine are ſaid to be deepeſt of milk which are new hare; that is, which have but lately calved, and have their milk deep ſpringing in their Udders, for at that time ſhe giveth the moſt milk; and if the quantity then be not convenient, doubtleſs the Cow cannot be ſaid to be of deep milk; and for the quantity of milk, for a Cow to give two gallons at a meal, is rare and extraordinary; to give a gallon and a half is much and convenient, and to give but a gallon certain, is not to be found fault with: Again, thoſe Kine are ſaid to be deep of milk, which though they give not ſo exceeding much milk as others, yet they give a reaſonable quantity, and give it long, as all the year through, whereas other Kine that give more in quantity will go dry being with Calf ſome three moneths, ſome two, and ſome one, but theſe will give their

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Of the going dry of Kine.

usual measure, even the night before they Calve; and therefore are said to be Kine deep of milk. Now for the retained opinion, that the Cow which goeth not dry at all, or very little, bringeth not forth so good a Calf as the other, because it wanteth much of the nourishment it should enjoy, it is vain and frivolous; for, should the substance from whence the milk proceedeth convert to the other intended nourishment, it would be so superabundant, that it would convert either to disease or putrifaction; but letting these secret reasons pass, there be some Kine which are so exceedingly full of milk, that they must be milkt at least thrice a day, at Morning, Noon and Evening, or else they will shed their milk; but it is a fault rather than a vertue, and proceedeth more from a laxativeness or looseness of milk, than from any abundance; for I never saw those three meals yet, equal the two meals of a good Cow; and therefore they are not truly called deep of milk.

Touching the gentleness of Kine, it is a vertue as fit to be expected as any other; for if she be not affable to the Maid, gentle and willing to come to the Pail, and patient to have her duggs drawn without skittishness, striking or wildness, she is utterly unfit for the dairy.

Of kindliness in Kine.

As a Cow must be gentle to her milker, so she must be kind in her own nature; that is, apt to conceive and bring forth, fruitfull to nourish, and loving to that which springs from her; for so she bringeth forth a double profit, the one for the time present, which is in the dairy, the other for the time to come, which is in the maintenance of the stock, and upholding of breed.

The best time to calve in for the Dairy or Breed.

The best time for a Cow to Calve in for the Dairy, is in the later end of *March* and all *April*: for then grass beginneth to spring to its perfect goodness, which will occasion the greatest increase of Milk that may be, and one good early Cow will countervail two later, yet the Calves thus calved are not to be reared, but suffered to feed upon their Dams best milk, and then to be sold to the Butchers, and surely the profit will equal the charge; but those Calves which fall in *October*, *November*, or any time of the depth of Winter may well be reared

reared up for breed, because the main profit of the Dairy is then spent, and such breed will hold up any Calves which are calved in the prime daies, for they generally are subject to the disease of the sturdy, which is dangerous and mortal.

Rearing of Calves.

The Housewife which only hath respect to her Dairy, and for whose knowledge this discourse is written (for we have shewed the Grasier his Office in the English Husbandman) must rear her calves upon the finger with flotten milk, and not suffer them to run with their Dams: the general manner whereof, and the cure of all the diseases incident to them and all other Cattel, is fully declared in the Book called *Cheap and Good.*

The general use of Dairies.

To proceed then to the general use of Dairies, it consisteth first in the Cattel (of which we have spoke sufficiently) then in the hours of milking, the ordering of the milk, and the profits arising from the same. The best and most commended hours for milking, are indeed but two in the day; that in the Spring and Summer-time which is the best season for the Dairy, is betwixt five and six in the morning, and six and seven a clock in the evening; and although nice and curious Housewifes will have a third hour betwixt them, as between twelve and one in the afternoon, yet the better experienc'd do not allow it, and say as I believe, that two good meals of milk are ever better than three bad ones; also in the milking of a Cow, the woman must sit on the neer side of the Cow, she must gently at the first handle and stretch her duggs, and moisten them with milk that they may yield out the milk the better, and with less pain; she shall not settle herself to milk, nor fix her pail firm to the ground till she see the Cow stand sure and firm, but be ready upon any motion of the Cow to save her pail from over-turning: when she seeth all things answerable to her desire, she shall then milk the Cow boldly, and not leaving stretching and straining of her teats till not one drop of milk more will come from them; for the worst point of Housewifery that can be, is to leave a Cow half milkt; for besides the loss of the milk, it is the only way to make a Cow dry, and utterly unprofitable for the Dairy. The Milk-maid whilest she is in milking, shall do nothing rashly or sud-

The hours of milking.

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denly about the Cow which may affright or amaze her; but as she came gently, so with all gentleness she shall depart.

Ordering of Milk.

Touching the well-ordering of milk after it is come home to the Dairy, the main point belonging thereunto is the Housewifes cleanliness, in the sweet and neat keeping of the Dairy-house, where not the least mote of any filth may by any means appear, but all things either to the eye or nose so void of sowrness or sluttishness, that a Princes Bed-chamber must not exceed it: to this must be added the sweet and delicate keeping of her milk vessels, whether they be of wood, earth or lead, the best as yet is disputable with the best Housewifes; only this opinion is generally received, that the wooden vessel which is round and shallow, is best in cold vaults, the earthen vessels principal for long keeping, and the leaden vessel for yielding of much Cream: but howsoever, any and all these must be carefully scalded once a day, and set in the open air to sweeten, lest getting any taint of sowrness into them, they corrupt the milk that shall be put therein.

Ordering of Milk vessels.

Syling of Milk.

But to proceed to my purpose, after your milk is come home, you shall as it were strain it from all unclean things through a neat and sweet kept Sylediſh, the form whereof every Housewife knows; and the bottom of this Syle through which the milk must pass, must be covered with a very clean-washt fine linnen-cloth, such an one as will not suffer the least mote or hair to go through it: you shall into every vessel soyl put a pretty quantity of milk, according to the proportion of the vessel, the broader it is, and the shallower it is, the better it is, and yie'deth ever the most Cream, and keepeth the milk longest from sowring.

Profits arising from Milk.

Now for the profits arising from milk, they are three of especial account, as Butter, Cheese and milk, to be eaten simple or compounded: as for Curds, sowr milk or Whig, they come from secondary means, and therefore may not be numbred with these.

Of Butter.

For your butter which only proceedeth from the Cream, which is the very heart and strength of Milk, it must be gathered very carefully, diligently and painfully: And though clean-

cleanlineſs be ſuch an Ornament to a Houſwife, that if ſhe want any part thereof, ſhe loſeth both that and all good names elſe: yet in this action it muſt be more ſeriouſly imployed than in any other.

Of fleeting Cream.

To begin then with the fleeting or gathering of your Cream from the Milk, you ſhall do it in this manner: The Milk which you do milk in the morning, you ſhall with a fine thin ſhallow diſh made for the purpoſe, take off the Cream about five of the Clock in the evening; and the milk which you did milk in the evening, you ſhall fleet and take off the Cream about five of the clock the next morning; and the Cream ſo taken off, you ſhall put it into a clean ſweet and well leaded earthen pot cloſe covered, and ſet it in a cloſe place; and this Cream ſo gathered, you ſhall not keep above two daies in the Summer, and not above four in the Winter, if you will have the ſweeteſt and beſt butter, and that your Dairy contain but five Kine and no more; but how many or few ſoever you keep, you ſhall not by any means preſerve your Cream above three daies in Summer, and not above ſix in the Winter.

Of keeping Cream.

Of churming butter, and the daies.

Your Cream being neatly and ſweet kept, you ſhall churm or churn it on thoſe uſual daies which are fitteſt either for your uſe in the houſe, or the Markets adjoyning neer unto you, according to the purpoſe for which you keep your Dairy. Now the daies moſt accuſtomably held amongſt ordinary Houſewifes, are Tueſdaies and Frydaies: Tueſday in the afternoon, to ſerve Wedneſday-morning market, and Friday-morning to ſerve Saturday-market; for Wedneſday and Saturday are the moſt general Market-daies of this Kingdom, and Wedneſday, Friday and Saturday, the uſual Faſting-daies of the week, and ſo meeteſt for the uſe of Butter. Now for Churming, take your Cream, and through a ſtrong and clean cloth ſtrain it into the Churm; and then covering the Churm cloſe, and ſetting it in a place fit for the action in which you are imployed; as in the Summer, in the cooleſt place of your Dairy, and exceeding early in the morning, or very late in the evening: And in the Winter, in the warmeſt place of your Dairy, and in the moſt temperate hours, as about noon, or a little before or after, and ſo churm it with

swift stroaks, marking the noise of the same, which will be solid, heavy and entire untill you hear it alter, and the sound is light, sharp and more spiritly; and then you shall say that your butter breaks, which perceived both by this sound, the lightness of the churm-staff, and the sparks and drops which will appear yellow about the lid of the Churm; then cleanse with your hand both the lid and the inward side of the churm, and having put all together, you shall cover the churm again, and then with easie stroaks round and not to the bottom, gather the butter together into one intire lump and body, leaving no pieces thereof several or unjoyned.

Helps in churming.

Now forasmuch as there be many mischiefs and inconveniences which may happen to butter in the churming, because it is a body of much tenderness, and neither will indure much heat nor much cold; for if it be over-heated, it will look white, crumble, and be bitter in taste; and if it be over-cold it will not come at all, but will make you waste much labour in vain: which faults to help, if you churm your butter in the heat of Summer it shall not be amiss, if during the time of your churming, you place your churm in a pail of cold water as deep as your Cream riseth in the churm, and in the churming thereof let your strokes go slow, and be sure that your churm be cold when you put in your Cream: but if you churm in the coldest time of Winter, you shall then put in your Cream before the churm be cold after it hath been scalded, then you shal place it within the air of the fire, and churm it with as swift strokes and as fast as may be, for the much labouring of it will keep it in a continual warmth, and thus you shall have your butter good, sweet, and according to your wish. After your butter is churn'd or churm'd, and gathered well together in your churm, you shall then open your churm, and with both your hands gather it well together, and take it from the butter-milk, and put it into a very clean bowl of wood or panshion of earth sweetened for the purpose, and if you intend to spend the butter sweet and fresh, you shall have your bowl or panshion filled with very clean water, and therein with your hand you shall work the butter, turning and tossing it to and fro, till you have by that labour beaten and wash'd out all

The handling of butter.

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the butter-milk, and brought the butter to a firm ſubſtance of it ſelf, without any other moiſture; which done, you ſhall take the butter from the water, and with a point of a knife ſcotch and ſlice the butter over and over every way as thick as is poſſible, leaving no part through which your knife muſt not paſs; for this will cleanſe and fetch out the ſmalleſt hair or mote, or rag of a ſtrainer, and any other thing which by caſual means may happen to fall into it.

After this you ſhall ſpread the butter in a bowl thin, and take ſo much ſalt as you think convenient, which muſt by no means be much for ſweet butter, and ſprinkle it thereupon; then with your hands work the butter and the ſalt exceeding well together, and then make it up either into diſhes, pounds or half pounds at your pleaſure.

If during the Moneth of *May* before you ſalt your butter you ſave a lump thereof and put it into a veſſel, and ſo ſet it into the Sun the ſpace of that moneth, you ſhall finde it exceeding ſoveraign and medicinable for wounds, ſtrains, aches and ſuch like grievances. Of May-butter.

Touching the powdering up, or potting of Butter, you ſhall by no means, as in freſh butter, waſh the butter-milk out with water, but only work it clear out with your hands: for water will make the butter ruſty or reeſe: this done, you ſhall weigh your butter, and know how many pounds there is thereof: for ſhould you weigh it after it were ſalted, you would be much deceived in the weight; which done, you ſhall open the butter and ſalt it very well and thoroughly, beating it in with your hand till it be generally diſperſt through the whole butter: then take clean earthen pots exceedingly well leaded, leſt the brine ſhould leak through the ſame, and caſt ſalt into the bottom of it: then lay in your butter, and preſs it down hard within the ſame; and when your pot is filled, then cover the top thereof with ſalt, ſo as no butter be ſeen: then cloſing up the pot, let it ſtand where it may be cold and ſafe: but if your Dairy be ſo little that you cannot at firſt fill up the pot, you ſhall then when you have potted up ſo much as you have, cover it all over with ſalt, and put the next quantity upon it till the pot be full.

Now there be Housewifes whose Dairies are great, which can by no means conveniently have their butter contained in pots, as in *Holland*, *Suffolk*, *Norfolk*, and such like, and therefore are forced to take barrels very close and well made; and after they have salted it well, they fill their barrels therewith; then they take a small stick clean and sweet, and therewith make divers holes down through the butter even to the bottom of the barrel; and then make a strong brine of water and salt which will bear an egg, and after it is well boyl'd, well skimm'd and cool'd, then pour it upon the top of the butter till it swim above the same, and so let it settle. Some use to boyl in this brine a branch or two of Rosemary, and it is not amiss, but pleasant and wholesome.

When to pot butter.

Now although you may at any time betwixt *May* and *September* pot up Butter, observing to do it in the coolest time of the morning; yet the most principal season of all is in the moneth of *May* only; for then the air is most temperate, and the Butter will take salt the best, and the least subject to reesing.

The best use of Butter-milk for the ablest House-wife is Charitably to bestow it on the poor neighbours, whose wants do daily cry out for sustenance; and no doubt but she shall find the profit thereof in a divine place, as well as in her earthly business. But if her own wants command her to use it for her own good, then she shall of her Butter-milk make Curds, in this manner: she shall take her Butter-milk and put it into a clean earthen vessel which is much larger than to receive the Butter-milk only; and looking unto the quantity thereof, she shall take as it were a third part so much of new milk and set it on the fire, and when it is ready to rise take it off, and let it cool a little; then powr it into the Butter-milk in the same manner as you would make a posset; and having stirred it about, let it stand; then with a fine scummer, when you will use the curds (for the longer it stands, the better the curds will eat) take them up into a Cullender, and let the whey drop well from it, and then eat them either with Cream, Ale, Wine or Beer; as for the Whey, you may keep it also in a sweet stone-vessel; for it is that which is called Whig,

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and it is an excellent cool drink, and wholesome, and may very well be drunk a summer through, in stead of any other drink; and without doubt, will slake the thirst of any labouring man as well, if not better.

The next main profit which ariseth from the Dairy, is Cheese, of which there be divers kinds, as new Milk, or morning Milk Cheese, Nettle-cheese, Flitten-milk-cheese, and Eddish, or After-math-cheese, all which have their several orderings and compositions, as you shall perceive by the discourse following. Yet before I do begin to speak of the making of the Cheese, I will shew you how to order your *Cheeslep-bag* or *Runnet*, which is the most principal thing wherewith your Cheese is compounded, and giveth the perfect taste unto the same. Of Cheese.

The *Cheslep-bag*, or *Runnet*, is the *stomack bag* of a young sucking Calf, which never tasted other food than milk, where the curd lieth undigested. Of these bags you shall in the beginning of the year, provide your self good store, and first open the bag, and pour out into a clean vessel the curd and thick substance thereof; but the rest which is not curdled you shall put away: then open the curd and pick out of it all manner of motes, chiers of grass, or the filth gotten into the same: then wash the curd in so many cold waters, till it be as white and clean from all sorts of moats as is possible; then lay it on a clean cloth that the water may drain from it; which done, lay it in another dry vessel; then take a handful or two of Salt, and rub the curd therewith exceedingly, then take your bag, and wash it also in divers cold waters till it be very clean, and then put the Curd and the Salt up into the bag, the bag being also well rub'd within with Salt; and so put it up, and salt the outside also over, and then cloze up the pot close, and so keep them a full year before you use them. For touching the hanging of them up in chimney corners, as course House-wives do) it is sluttish, naught, and unwholesome; and the spending of your Runnet whilest it is new, makes your Cheese heavy, and to prove hollow. Of the Cheeslep bag or Runnet.

When your Runnet or Earning is fit to be used, you shall season

ſeaſon it after this manner; you ſhall take the bag you intend to uſe, and opening it, put the curd into a ſtone mortar or a bowl, and with a wooden peſtle, or a rolling pin beat it exceedingly; then put to it the yelks of two or three eggs, and half a pint of the thickeſt and ſweeteſt Cream you can fleet from your Milk, with a penny-worth of Saffron finely dryed and beaten to powder, together with a little Cloves, and Mace, and ſtir them all paſſing well together, till they appear but as one ſubſtance, and then put it up in the bag again: then you ſhall make a very ſtrong brine of water and ſalt, and in the ſame you ſhall boyl a handful of Saxifrage, and then when it is cold, clear it into a clean earthen veſſel: then take out of the bag half a dozen ſpoonfuls of the former curd, and mix it with the brine; then cloſing the bag up again cloſe, hang it with the brine, and in any caſe alſo ſteep in your brine a few Walnut-tree leaves, and ſo keep your Runnet a fortnight after before you uſe it; and in this manner, dreſs all your bags ſo, as you may ever have one ready after another, and the youngeſt a fortnight old ever at the leaſt; for that will make the earning quick and ſharp, ſo that four ſpoonfuls thereof will ſuffice for the gathering and ſeaſoning of at leaſt twelve gallons of Milk, and this is the choyceſt and beſt earning which can poſſible be made by any Houſewife.

To make a new Milk or morning Milk Cheeſe, which is the beſt Cheeſe made ordinarily in our Kingdom; you ſhall take your Milk early in the morning, as it comes from the Cow, and ſyle it into a clean Tub; then take all the Cream alſo from the Milk you milk'd the evening before, and ſtrain it into your new Milk: then take a pretty quantity of clean water, and having made it ſcalding hot, pour it into the Milk alſo to ſcald the Cream and it together, then let it ſtand, and cool it with a diſh till it be no more than luke-warm; then go to the pot where your earning bags hang, and draw from thence ſo much of the earning without ſtirring of the bag, as will ſerve for your proportion of Milk, and ſtrain it therein very carefully; for if the leaſt mote of the curd of the earning fall into the Cheeſe, it will make the Cheeſe rot and mould;

mould; when your earning is put in, you shall cover the Milk, and so let it stand half an hour or thereabout; for if the earning be good, it will come in that space; but if you see it doth not, then you shall put in more: being come, you shall with a dish in your hand break and mash the curd together, posting and turning it diversly: which done, with the flat palmes of your hands very gently press the curd down into the bottom of the Tub; then with a thin dish take the whey from it as clear as you can, and so having prepared your Cheese-fat answerable to the proportion of your Curd, with both your hands joyned together, put your Curd therein and break it, and press it down hard into the fat, till you have fill'd it; then lay upon the top of the Curd your hard Cheese-board, and a little small weight thereupon, that the whey may drop from it into the under vessel; when it hath done dropping, take a large Cheese-cloth, and having wet it in the cold water, lay it on the Cheese-board, and then turn the Cheese upon it; then lay the cloth into the Cheese-fat, and so put the Cheese therein again, and with a thin slice thrust the same down close on every side: then laying the cloth also over the top to lay on the Cheese-board, and so carry it to your great press, and there press it under a sufficient weight: after it hath been there prest half an hour, you shall take it, and turn it into a dry cloth, and put it into the press again, and thus you shall turn it into dry clothes at least five or six times in the first day, and ever put it under the press again, not taking it therefrom till the next day in the evening at soonest, and at the last time it is turned, you shall turn it into the dry fat without any cloth at all.

When it is prest sufficiently, and taken from the fat, you shall then lay it in a Kimnel, and rub it first on the one side, and then on the other with salt, and so let it lie all that night, then the next morning you shall do the like again, and so turn it out upon the brine, which comes from the Salt two or three dayes more, according to the bigness of the Cheese, and then lay it upon a fair Table or shelf to dry, forgetting not every day once to rub it all over with a clean cloth,

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and then to turn it till such time that it be throughly dry, and fit to go into the Cheese-heck: and in this manner of drying, you must observe to lay it first where it may dry hastily, and after where it may dry at more leisure: thus may you make the best and most principal Cheese.

A Cheese of two meals.

Now if you will make a Cheese of two meals, as your mornings new milk, and the evenings cream milk, all you shall do, is but the same formerly rehearsed. And if you will make a simple morning milk Cheese, which is all of new milk, and nothing else, you shall then do as is before declared, only you shall put in your earning so soon as the milk is syl'd, (if it have any warmth int) and not scald it: but if the warmth be lost, you shall put it into a Kettle, and give it the air of the fire.

Cheese of one meal.

Of Nettle Cheese.

If you will have a very dainty nettle Cheese, which is the finest Summer Cheese which can be eaten; you shall do in all things as was formerly taught in the new milk Cheese compound: only you shall put the curd into a very thin Cheese-fat, not above half an inch, or a little better deep at the most, and then when you come to dry them, as soon as it is drained from the brine, you shall lay it upon fresh nettles, and cover it all over with the same, and so lying where they may feel the aire, let them ripen therein, observing to renew your nettles once in two dayes, and every time you renew them, to turn the Cheese or Cheeses, and to gather your nettles as much without stalks as may be, and to make the bed both under and aloft as smooth as may be for the more even and fewer wrinkles that your cheese hath, the more dainty is your House-wife accounted.

Of flitten milk cheese.

If you will make flitten milk cheese, which is the courset of all cheese, you shall take some of the milk, and heat it upon the fire to warm all the rest; but if it be sour, that you dare not adventure the warming of it for fear of breaking, then you shall heat water, and with it warm it; then put in your earning as before shewed, and gather it, press it, salt it, and dry it, as you did all other Cheeses.

Of Eddish cheese.

Touching your Eddish Cheese, or Winter Cheese, there is not any difference betwixt it and your Summer Cheese, touching

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ing the making thereof only, because the season of the year denyeth a kindly drying or hardning thereof, it differeth much in taste, and will be soft alwayes; and of these eddish Cheeses you may make as many kinds as of Summer Cheeses, as of one meal, two meals, or of milk that is flotten.

When you have made your Cheese, you shall then have care of the Whey, whose general use differeth not from that of Butter-milk, for either you shall preserve it to bestow on the poor, because it is a good drink for the labouring man, or keep it to make curds out of it; or lastly, to nourish and bring up your Swine.

If you will make curds of your best Whey, you shall set it upon the fire, and being ready to boyl, you shall put into it a pretty quantity of Butter-milk, and then as you see the Curds arising up to the Top of the Whey, with a skummer skim them off, and put them into a Cullender, and then put in more Butter-milk; and thus do whilst you can see any Curds arise; then the Whey being drained clean from them, put them into a clean vessel, and so serve them forth as occasion shall serve. Of Whey Curds.

CHAP. VII.

The Office of the Mault, and the severall secrets, and knowledges belonging to the making of Mault.

IT is most requisite and fit, that our *House-wife* be experienced and well practised in the well making of Mault, both for the necessary and continuall use thereof, as also for the general profit which accreweth and ariseth to the *Husband*, *House-wife*, and the whole Family; for as from it is made the drink by which the Houshold is nourished and sustained, so to the fruitful Husband-man, (who is the Master of rich ground, and much Tillage) it is an excellent Merchandise, and a commodity of so great Trade, that not onely speciall Towns and Countries are maintained thereby, but also the whole Kingdome, and divers others of our Neighbouring Nations,

tions. This office or place of knowledg belongeth particularly to the House-wife; and though we have many excellent Men-maulsters, yet it is properly the work and care of the woman, for it is a house-work, and done altogether within doors, where generally lyeth her charge; the man only ought to bring in, and to provide the grain, and excuse her from portage or too heavy burthens; but for the Art of making the Mault, and the severall labours appertaining to the same, even from the Fat to the Kiln, it is only the work of the House-wife, and the Maid-servants to her appertaining.

To begin then with the first knowledg of our Maulster, it consisteth in the election and choice of grain, fit to make Mault on, of which there are indeed truly but two kinds, that is to say, Barley, which is of all other the most excellent for this purpose; and Oats, which when Barley is scant or wanting, maketh also a good and sufficient Mault: and though the drink which is drawn from it, be neither so much in the quantity, so strong in the substance, nor yet so pleasant in the taste, yet is the drink very good and tollerable, and nourishing enough for any reasonable Creature. Now I do not deny, but there may be made Mault of Wheat, Pease, Lupins, Vetches, and such like, yet it is with us of no retained custome, nor is the drink simply drawn or extracted from those grains, either wholesome or pleasant, but strong and fulsome: therefore I think it not fit to spend any time in treating of the same. To speak then of the election of Barly, you shall understand that there be divers kinds thereof, according to the alteration of soyls, some being big, some little, some empty, some full, some white, some brown, and some yellow; but I will reduce all these into three kinds, that is, into the Clay Barley, the Sandy-Barly, and the Barly which groweth on the mixt soyl. Now the best Barley to make Mault on, both for yielding the greatest quantity of matter, and making the strongest, best, and most wholesome drink, is the Clay Barley well dresst, being clean Corn of it self, without Weeds or Oats, white of colour, full in substance, and sweet in taste: that which groweth on the mixt grounds is the next: for though it be subject to some Oats and

and some Weeds; yet being painfully and carefully dreſt, it is a fair and boll'd Corn, great and full; and though somewhat browner than the former, yet it is of a fair and clean complexion. The laſt and worſt grain for this purpoſe, is the Sandy Barly; for although it be ſeldome or never mixt with Oats, yet if the Tillage be not painfully and cunningly handled, it is much ſubject to weeds of divers kinds, as Tares, Vetches, and ſuch like, which drink up the Liquor in the Brewing, and make the yeeld or quantity thereof very little and unprofitable: beſides the grain naturally of it ſelf hath a yellow, withered, empty husk, thick and unfurniſhed of meal, ſo that the drink drawn from it, can neither be ſo much, ſo ſtrong, ſo good, nor ſo pleaſant; ſo that to conclude, the clean Clay Barley is beſt for profit in the ſale drink, for ſtrength and long laſting.

The Barley in the mixt grounds will ſerve well for Houſholds and Families; and the Sandy Barley for the poor, and in ſuch places where better is not to be gotten. And theſe are to be known of every *Husband* or *Houſe-wife*: the firſt by his whiteneſs, greatneſs, and fulneſs: the ſecond by his browneneſs; and the third by his yellowneſs, with a dark brown nether end, and the emptineſs and thickneſs of the husk: and (in this election of Barley) you ſhall note, That if you find in it any wild Oats, it is a ſign of rich clay ground, but ill Husband; yet the Mault made thereof is not much amiſs, for both the wild Oat and the perfect Oat give a pleaſant ſharp reliſh to the drink, if the quantity be not too much, which is evermore to be reſpected. And to conclude this matter of election, great care muſt be had of both *Husband* and *Houſe-wife*, that the Barley choſen for Mault, be exceeding ſweet, both in ſmell and taſte, and very clean dreſt: for any corruption maketh the Mault loathſome, and the foul dreſſing affordeth much loſs.

Of the Mault-houſe, and the ſituation.

After the skilful election of grain for Mault, the *Houſe-wife* is to look to the ſituation, goodneſs and apt accommodation of the Mault-houſe: for in that conſiſteth both much of the skill, and much of the profit: for the general ſituation of the houſe, it would (as near as can be) ſtand upon firm dry ground, having proſpect every way, with open Windows and Lights to let in the

Wind, Sun, and Ayr, which way the Maſter pleaſeth, both to cool and comfort the grain at pleaſure, and alſo cloſe-ſhuts, or draw-windows to keep out the Froſts and Storms, which are the only lets and hinderances for making the Mault good and perfect: For the model or form of the houſes, ſome are made round, with a Court in the middle, ſome long, and ſome ſquare, but the round is the beſt, and the leaſt laborious; for the Ciſterns or Fats being placed (as it were) at the head or beginning of the Circle, and the Pump or Well, (but the Pump is beſt) being cloſe adjoyning, or at leaſt by conveyance of troughs made as uſefull as if it were near adjoyning, the Corn being ſteept, may with one perſons labour and a ſhovel, be caſt from the Fat or Ciſtern to the floor, and there coucht; then when the Couch is broken, it may in the turning either with the hand or the ſhovel be carried in ſuch a circular houſe round about from one floor to another, till it come to the Kiln, which would alſo be placed next over againſt the Pump and Ciſterns, and all contained under one roof.

And thus you may empty ſteeping after ſteeping, and carry them with one perſons labour from floor to floor, till all the floors be filled: in which circular motion you ſhall find, that ever that which was firſt ſteept, ſhall firſt come to the Kiln, and ſo conſequently one after another, in ſuch ſort as they were ſteeped, and your work may evermore be conſtant, and your floors at no time empty, but at your own pleaſure, and all the labour done onely with the hand and ſhovell, without carrying or re-carrying, or lifting heavy burthens, which is both troubleſome and offenſive, and not without much loſs, becauſe in ſuch caſes ever ſome grain ſcattereth.

Now over againſt the Kilne-hole or Furnace, (which is evermore intended to be on the ground) ſhould a convenient place be made to pile the fewel for the Kiln, whether it be Straw, Bracken Furres, Wood, Coal, or other fewel; but ſweet Straw is of all other the beſt and neateſt. Now it is intended that this *Mault-houſe* may be made two Stories in height, but no higher: over your Ciſterns ſhall be made the Garners wherein to keep your Barley before it be ſteeped; in the bottoms of theſe Garners, ſtanding directly over the Ciſterns, ſhall be convenient holes

holes made to open and ſhut at pleaſure, through which ſhall run down the Barley into the Ciſtern.

Over the Bed of the Kiln can be nothing but the place for the Hair-cloth, and a ſpacious roof open every way that the ſmoke may have a free paſſage, and with the leaſt air be carried from the kiln, which maketh the Mault ſweet and pleaſant. Over that place where the fewel is piled, and is next of all to the bed of the Kiln, would likewiſe be other ſpacious Garners made, ſome to receive the Mault as ſoon as it is dryed with the Comb and Kiln duſt, in which it may lye to mellow and ripen, and others to receive the mault after it is skreened and dreſt up; for to let it be too long in the Comb, as above, three moneths at longeſt, will make it both corrupt, and breed Weevels and other Worms, which are the greateſt deſtroyers of mault that may be. And theſe Garners ſhould be ſo conveniently plac't before the front of the Kiln bed, that either with the ſhovel or a ſmall ſcuttle you may caſt, or carry the mault once dryed into the Garners.

Of Mault-floors.

For the other part of the floors, they may be employed as the ground floors are, for the receiving of the mault when it comes from the Ciſtern; and in this manner, and with theſe accommodations you may faſhion any Mault-houſe, either round, long, ſquare, or of what proportion ſoever, as either your eſtate, or the convenience of the ground you have to build on ſhall adminiſter.

Next to the ſite or proportion of the ground, you ſhall have a principal care for the making of your mault-floors, in which *all the cuſtome and the nature of the ſoyl binds many times a man to ſundry inconveniences, and that a man muſt neceſſarily build according to the matter he hath to build withall, from whence ariſeth the many diverſities of Mault floors*, yet you ſhall underſtand, that the general beſt Mault floor both for Summer and Winter and all ſeaſons, is the Cave or vaulted Arch which is hewed out of a dry and main gretty Rock, for it is both warm in Winter, and cool in Summer, and generally comfortable in all ſeaſons of the year whatſoever. For it is to be noted, that all *Houſewives* do give over the making of Mault in the extream heat of Summer, it is not becauſe the Mault is worſe that is made in Summer than that which is made in Winter, but becauſe the floors are more unſeaſonable, and that the Sun getting a power into ſuch open

places

places, maketh the grain which is steeped to sprout and come so swiftly, that it cannot endure to take time on the floor, and get the right seasoning which belongeth to the same: whereas these kind of Vaults being dry, and as it were coucht under the ground, not onely keepeth out the Sun in Summer, which maketh the Mault come much too fast, but also defendeth it from frost, and cold bitter blasts in sharp Winter, which will not suffer it to come, or sprout at all; or if part do come and sprout, as that which lyeth in the heart of the bed; yet the upper parts and outside by means of extream cold cannot sprout, but being again dryed hath its first hardness, and is one and the same with raw Barley; for every *House-wife* must know, That if Mault do not come as it were altogether, and at an instant, and not one come more than another, the Mault must needs be very much imperfect.

The next floor to the Cave, or dry Sandy Rock, is the floor which is made of Earth, or a stiff strong binding clay well watered, and mixt with Horse-dung and Soap-ashes, beaten and wrought together, till it come to one solid firmness; this floor is a very warm comfortable Floor in the Winter season, and will help the grain to come and sprout exceedingly, and with the help of windows to let in the cold ayr, and to shut out the violent reflection of the Sun, will serve very conveniently for the making of Mault for nine moneths in the year, that is to say, from *September* till the end of *May*; but for *June*, *July*, and *August*, to imploy it to that purpose, will breed both loss and incumbrance. The next floor to this of the Earth, is that which is made of *Plaister*, or *Plaister of Paris*, being burnt in a seasonable time, and kept from wet, till the time of shooting, and then smoothly laid, and well levelled; the imperfection of the *Plaister Floor* is only the extream coldness thereof, which in frosty and cold seasons so bindeth in the heart of the Grain, that it cannot sprout; for which cause it behoveth every Maulster that is compelled to these floors, to look well unto the seasons of the year, and when he findeth either the frosts, Northern blasts, or other nipping storms to rage too violently, then to make his first couches or beds, when the Grain cometh newly out of the Cestern, much thicker and rounder than otherwise he would do; and as the cold abateth, or

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the Corn encreaseth in sprouting, so to make Couches or Beds thinner and thinner; for the thicker and closer the grain is coucht and laid together, the warmer it lyeth, and so catching heat, the sooner it sprouteth; and the thinner it lyeth, the cooler it is, and so much the slower in sprouting. This Floor, if the Windows be close, and guard off the Sun sufficiently, will (if necessity compel) serve for the making of Mault ten moneths in the year; only in *July* and *August* which contain the Dog-dayes, it would not be employed, nor in the time of any Frost, without great care and circumspection.

Again, there is in this Floor another fault, which is a natural casting out of dust, which much sullieth the grain; and, being dryed, makes it look dun and foul, which is much disparagement to the Maulster; therefore she must have great care that when the Mault is taken away, she sweep and keep her floors as clean and neat as may be. The last and worst is the boarded floor, of what kind soever it be, by reason of the too much heat thereof, and yet of boarded floors the Oaken boarded is the coolest and longest lasting; the Elme or Beech is next, then the Ash, and the worst (though it be the fairest to the Eye) is the Firre, for it hath in it self (by reason of the Frankincense and Turpentine which it holdeth) a natural heat, which mixed with the violence of the Sun in the Summer time, forceth the grain not onely to sprout but to grow in the Couch, which is much loss, and a foul imputation. Now these boarded floors can hardly be in use for above five moneths at the most, that is to say, *October*, *November*, *December*, *January*, and *February*; for the rest, the Sun hath too much strength, and these boarded floors too much warmth; and therefore in the coolest times it is good to observe to make the Couch thin, whereby the ayr may pass through the Corn, and so cool it, that it may sprout at leisure.

Now for any other floor besides these already named, there is not any good to mault upon; for the common floor which is of natural Earth, whether it be Clay, Sand or Gravel, if it have no mixture at all with it more than its own nature, by oft treading upon it, groweth to gather the nature of saltness, or Salt-peter into it, which not only giveth an ill taste to the grain that is laid upon the same, but also his moysture and mouldiness, which in the: Imperfect floors.

the moist times of the year arise from the ground, it often corrupteth and putrifieth the Corn; the rough paved floor by reason of the unevenness, is unfit to maulton, because the grain getting into the crannies, doth there lye, and is not removed or turned up and down as it should be with the hand, but many times is so fixed to the ground that it sprouteth and groweth up into a green blade, affording much loss and hinderance to the owner.

The smooth paved floor, or any floor of Stone whatsoever is full as ill; for every one of them naturally against much wet or change of weather, will sweat and distill forth such abundant moisture, that the Mault lying upon the same, can neither dry kindly, nor expel the former moisture received in the Cistern, but also by that over-much moisture many times rotteth, and comes to be altogether useless. Lastly, for the floor made of Lime and Hair, it is as ill as any formerly spoken of, both in respect of the nature of the Lime, whose heat and sharpness is a main enemy to Mault, or any moist Corn, as also in respect of the weakness and brittleness of the substance thereof, being apt to moulder and fall in pieces with the lightest treading on the same, and that Lime and Dust once mixing with the Corn, it doth so poyson and suffocate it, that it neither can sprout, nor turn serviceable for any use.

Of the Kiln, and the building thereof.

Next unto the Mault-floors, our Maulster shall have a great care in the framing and fashioning of the Kiln, of which there are sundry sorts of models, as the ancient form which was in times past used of our fore-fathers, being onely made in a square proportion at the top, with small splints or rafters, joyned within four inches one of another going from a main beam crossing the mid part of that great square: then is this great square from the top, with good and sufficient studs to be drawn slope-wise narrower and narrower, till it come to the ground, so that the hearth or lowest part thereof may not be above a sixth part to the great square above, on which the Mault is laid to be dryed; and this hearth shall be made hollow and descending, and not level nor ascending; and these Kilns do not hold any certain quantity in the upper square, but may ever be according to the frame of the house, some being thirty foot each way, some twenty, and some

some eighteen. There be other Kilns which are made after this manner open and slope, but they are round of proportion; but both these kinds of Kilns have one fault, which is danger of fire; lying every way open and apt for the blaze, if the *Maltster* be any thing negligent, either in the bouting of the blaze low and forward, or not sweeping every part about the hirth any thing that may take fire, or fore-seeing that no straws which do belong to the bedding of the Kiln do hang down or are loose, whereby the fire may take hold of them, it is very possible that the Kiln may be set on fire; to the great loss and often undoing of the owners.

Which to prevent, and that the *Malster* may have better assurance and comfort in her labour, there is a Kiln now of general use in this Kingdom, which is call'd a *French* Kiln, being framed of a brick, ashler, or other fire stone, according to the nature of the soyl in which Husbands and Housewives live: and this *French* Kiln is ever safe and secure from fire, and whether the *Maltster* wake or sleep, without extream wilful negligence, there can no danger come to the Kiln; and in these Kilns may be burnt any kind of fewel whatsoever, and neither shall the smoak offend or breed ill taste in the Malt, nor yet discolour it, as many times it doth in open Kilns, where the Malt is as it were covered all over, and even parboyl'd in smoke, so that of all sorts of Kilns whatsoever, this which is called the *French* Kiln, is to be preferred and only embraced. Of the form or model whereof, I will not here stand to treat, because they are now so generally frequent amongst us, that no Mason or Carpenter in the whole Kingdome but can build the same; so that to use more words thereof were tediousness to little purpose. Now there is another kind of Kiln, which I have seen (and but in the West Countrey only) which for the profitable quaintness thereof, I took some special note of, and that was a Kiln made at the end of a Kitchin Range or Chimney, being in shape round, and made of brick, with a little hollowness narrowed by degrees, into which came from the bottom and midst of the Kitchin-chimney a hollow tunnel or vault, like the tunnel of a Chimney, and ran directly on the back-side the hood, or back of the Kitchin-chimney; then in the midst of the Chimney where

The perfect Kiln.

the greatest strength of the fire was made, was a square hole made of about a foot and half every way, with an iron thick plate to draw to and fro, opening and closing the hole at pleasure; and this hole doth open only into that tunnel which went to the Kiln, so that the Malt being once laid, and spread upon the Kiln; draw away the iron plate, and the ordinary fire with which you dress your meat, and perform other necessary business, is suckt up into this tunnel, and so conveyeth the heat to the Kiln, where it dryeth the Malt with as great perfection as any Kiln I saw in my life, and needeth neither attendance or other ceremony more, then once in five or six hours to turn the Malt, and take it away when it is dryed sufficiently: for it is here to be noted, that how great or violent soever the fire be, which is in the chimney, yet by reason of the passage, and the quantity thereof, it carryeth no more then a moderate heat to the Kiln; and for the smoak, it is so carried away in other loop-holes which run from the hollowness between the tunnel, and the Malt-bed, that no Malt in the world can possibly be sweeter or more delicately coloured: only the fault of these Kilns are, that they are but little in compass, and so cannot dry much at a time, as not above a quarter or ten strikes at the most in one drying, and therefore are no more but for a mans own particular use, and for the furnishing of one setled Family; but so applyed, they exceed all the Kilns that I have seen whatsoever.

Bedding of the Kiln.

When our *Maister* hath thus perfected the Malt-house and Kiln, then next look to the well bedding of the Kiln, which is diversly done according to mens divers opinions: for some use one thing, and some another, as the necessity of the place, or mens particular profits draw them.

But first to shew you what the bedding of a Kiln is, you shall understand that it is a thin covering laid upon the open rafters, which are next unto the heat of the fire, being made either so thin, or so open, that the smallest heat may pass through it, and come to the corn; this bed must be laid so even and level as may be, and not thicker in one place than another, lest the Malt dry too fast where it is thinnest, and too slowly where it is thick, and so in the taste seem to be of two several dryings.

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It must also be made of such stuff, as having received heat, it will long continue the same, and be assistant to the fire in drying the corn; it should also have in it no moist or dankish property, lest at the first receiving of the fire it send out a stinking smoak, and so taint the Malt; nor should it be of any rough or sharp substance, because upon this bed or bedding is laid the hair-cloth, and on the hair-cloth the Malt, so that with the turning the Malt and treading upon the cloth, should the bed be of any such roughness, it would soon wear out the hair-cloth, which would be both loss and ill Housewifery, which is carefully to be eschewed.

But now for the manner or substance whereof this bedding shou'd be made, the best, neatest, and sweetest, is clean long Rye-straw, with the ears only cut off, and the ends laid even together, not one longer than another, and so spread upon the rafter of the Kiln as even and thin as may be, and laid as it were straw by straw in a just proportion, where skill and industry may make it thin or thick at pleasure, as but the thickness of one straw, or of two, three, four or five, as shall seem to your judgement most convenient; and than this, there can be nothing more even, more dry, sweet, or open to let in the heat at your pleasure; and although in the old open Kilns it be subject to danger of fire, by reason of the quickness to receive the flame, yet in the French Kilns (before mentioned) it is a most safe bedding, for not any fire can come near unto it. There be others which bed the Kiln with Matt; and it is not much to be misliked, if the Mat be made of Rye straw sowed, and woven together according to the manner of the *Indian Mats*, or those usual thin *Bent Mats*, which you shall commonly see in the Summer time standing in Husbandmens Chimneys, where one bent or straw is laid by another, and so woven together with a good strong pack-thread: but these Mats according to the old Proverb (*Most cost, most worship*) are chargeable to be bought, and very troublesome in the making, and in the wearing will not out-last one of the former loose beddings; for if one thread or stitch break, immediately most in that row will follow: only it is most certain, that during the time it lasteth, it is both

both good, necessary and handsome. But if the *Mat* be made either of Bul-rushes, Flags, or any other thick substance (as for the most part they are) then it is not so good a bedding, both because the thickness keepeth out the heat, and is long before it can be warmed; as also in that it ever being cold, naturally of it self draweth into it a certain moisture, which with the first heat being expelled in smoak, doth much offend and breed ill taste in the *Malt*. There be others that bed the Kiln with a kind of *Mat* made of broad thin splints of wood wrought Checquer-wise one into another, and it hath the same faults which the thick *Mat* hath; for it is long in catching the heat, and will ever smoak at the first warming, and that smoak will the *Malt* smell on ever after; for the smoak of *Wood* is ever more sharp and piercing than any other smoak whatsoever.

Besides, this *Wooden-Mat*, after it hath once bedded the Kiln, it can hardly afterward be taken up or removed; for by continual heat, being brought to such an extreme dryness, if upon any occasion either to mend the Kiln, or cleanse the Kiln, or do other necessary labour underneath the bedding, you shall take up the *wooden-mat*, it would presently crack, and fall to pieces, and be no more serviceable.

There be others which bed the Kiln with a bedding made all of *Wickers*, of small wands folded one in another like a hurdle, or such wand work; but it is made very open, every wand at least two or three fingers one from another; and this kind of bedding is a very strong kind of bedding, and will last longest, and catcheth the heat at the first springing, only the smoak is offensive, and the roughness without great care used, will soon wear out your hair-cloth; yet in such places where *straw* is not to be got or spared, and that you are compelled only to use *wood* for your fewel in drying your Malt, I allow this bedding before any other, for it is very good, strong, and long lasting: Besides, it may be taken up and set by at pleasure, so that you may sweep and cleanse your Kiln as oft as occasion shall serve, and in the neat and fine keeping of the Kiln, doth consist much of the *House-wives* Art; for to be choakt either with dust, durt, soot or ashes, as it shews slut-

tishness

tiſhneſs and ſloth; the only great imputations hanging over a *Houſe-wife*; ſo likewiſe they hinder the labour, and make the malt dry a great deal worſe, and more unkindly.

Next the bedding of the Kiln, our Maltſter by all means muſt have an eſpecial care with what fewel ſhe dryeth the malt; for commonly, according to that it ever receiveth and keepeth the taſte, if by ſome eſpecial art in the Kiln that annoyance be not taken away. To ſpeak then of fewels in general, there are of divers kinds according to the natures of ſoyls, and the accommodation of places in which men live; yet the beſt and moſt principal fewel for the Kilns, (both for ſweetneſs, gentle heat and perfect drying) is either good Wheat-ſtraw, Rye-ſtraw, Barley-ſtraw or Oaten-ſtraw; and of theſe the Wheat-ſtraw is the beſt, becauſe it is moſt ſubſtantial, longeſt laſting, makes the ſharpeſt fire, and yields the leaſt flame; The next is Rye-ſtraw, then Oaten-ſtraw, and laſt Barley-ſtraw, which by reaſon it is ſhorteſt, lighteſt, leaſt laſting, and giveth more blaze than heat, it is laſt of theſe white ſtraws to be choſen; and where any of theſe fail or are ſcarce, you may take the ſtubble or after-crop of them when the upper part is ſhorn away, which being well dryed and houſed, is as good as any of the reſt already ſpoken of; and leſs chargeable, becauſe it is not fit for any better purpoſe, as to make fodder, manure, or ſuch like, or more than ordinary thatching, and ſo fitteſt for this purpoſe. Next to theſe white ſtraws, your long Fen-ruſhes being very exceedingly well withered and dryed, and all the ſappy moyſture gotten out of them, and ſo either ſafely houſed or ſtacked, are the beſt fewel; for they make a very ſubſtantial fire and much laſting, neither are apt to much blazing, nor the ſmoke ſo ſharp or violent, but may very well be endured: where all theſe are wanting, you may take the Straw of Peaſe, Fetches, Lupins or Tares, any of which will ſerve, yet the ſmoke is apt to taint, and the fire without prevention dryeth too ſuddenly and ſwiftly. Next to theſe is clean Bean-ſtraw, or ſtraw mixt of Beans and Peaſe together; but this muſt be handled with great diſcretion, for the ſubſtance containeth ſo much heat that it will rather burn than dry, if it be not moderated, and

Of fewel for the drying of Malt.

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the smoke is also much offensive. Next to this Bean-straw, is your Furs, Gorse, Whins, or small Brush-wood, which differeth not much from Bean-straw, only the smoke is much sharper, and tainteth the malt with a much stronger savour. To these I may add Braken or Brakes, Ling, Heath or Broom, all which may serve in time of necessity, but each one of them have this fault, that they add to the malt an ill taste or savour. After these I place wood of all sorts, for each is a like hoysome, and if the smoke which cometh from it touch the malt, the infection cannot be removed; from whence amongst the best Husbands hath sprung this Opinion, that when at any time drink is ill tasted, they say straight, it was made of wood-dryed malt. And thus you see the generality of fewels, their vertues, faults, and how they are to be imployed. Now for Coal of all kinds, Turf or Peate, they are not by any means to be used under Kilns, except where the furnaces are so subtilly made that the smoke is conveyed a quite contrary way, and never cometh neer the malt; in that case it skilleth not what fewel you use, so it be durable and cheap, it is fit for the purpose; only great regard must be had to the gentleness of the fire, for, as the old Proverb is, (Soft fire makes sweet Malt) so too rash and hasty a fire scorcheth and burneth it, which is called among Maltsters Fire-fanged, and such malt is good for little or no purpose; therefore to keep a temperate and true fire, is the only Art of a most skilfull Maltster.

When the Kiln is thus made, and furnished of all necessaries duely belonging to the same, you Maltsters next care shall be to the fashioning and making of the Garners, Hurches or Holds, in which both the malt after it is dryed, and the Barley before it be steeped, is to be kept and preserved; and these Garners or Safes for Corn are made of divers fashions, and divers matters; as some of Boards, some of Bricks, some of Stone, some of Lime and Hair, and some of Mud, Clay or Loame: but all of these have their several faults; for wood of all kinds breedeth Weevels and Worms which destroy the Grain, and is indeed much too hot; for although malt would ever be kept passing dry, yet never so little overplus of heat withers it, and takes away the vertue; for as moisture rots and

corrupts

corrupts it, so heat takes away and decayeth the substance. Brick, because it is laid with Lime is altogether unwholsome; for the Lime being apt at change of weather to sweat, moisteneth the grain, and so tainteth it; and in the dryest seasons with the sharp hot taste doth fully as much offend it: those which are made of Stone, are much more noysome, both in respect of the reasons before rehearsed, as also in that all Stone of it self will sweat, and so more and more corrupteth the grain which is harboured in it. Lime and hair being of the same nature, carrieth the same offences, and is in the like sort to be eschewed. Now for Mud, Clay or Loame, in as much as they must necessarily be mixt with wood, because otherwise of themselves they cannot knit or bind together; and besides that, the Clay or Loame must be mixt either with chopt hay, chopt straw, or chopt Litter, they are as great breeders of Worms and Vermine as wood is, nor are they defences against Mice, but easie to be wrought through, and so very unprofitable for any Husband or House-wife to use. Besides, they are much too hot, and being either in a close house neer the Kiln or the back or face of any other Chimney, they dry the Corn too sore, and make it dwindle and wither, so that it neither filleth the Bushel nor enricheth the Liquor, but turns to loss every way. The best Garner then that can be made both for safety and profit, is to be made either of broken tile-sherd or broken bricks cunningly and even layd and bound together with Plaster of Paris, or our ordinary English Plaster, or burnt Alabaster, and then covered all over both within and without, in the bottom and on every side, at least three fingers thick with the same Plaster, so as no brick or tyle-sherd may by any means be seen, or come neer to touch the Corn; and these Garners you may make as big or as little as you please, according to the frame of your house, or place of most convenience for the purpose, which indeed would ever be as neer the Kiln as may be, that the air of the fire in the daies of drying may come unto the same, or else neer the backs or sides of Chimneys, where the air thereof may correct the extreme coldness of the Plaster, which of all things that are bred in the earth, is the coldest thing that may be, and yet most dry, and not apt to sweat

or

or take moysture, but by some violent extremity; neither will any worm or vermine come near it, because the great coldness thereof is a mortal enemie to their natures, and so the safest and longest these Garners of Plasters keep all kind of Grain and Pulse in the best perfection.

The making of Cisterns.

After these Garners, Hutches, or large Keeps for Corn are perfected and made, and fitly adjoyned to the Kiln, the next thing that our Maltster hath to look unto, is the framing of the Fatts or Cisterns wherein the Corn is to be steeped: and they are of two sorts, that is, either of Coopers work, being great Fatts of wood, or else of Masons work, being Cisterns made of stone; but the Cistern of stone is much the better: for besides that, these great Fatts of Wood are very chargeable and costly (as a Fatt to contain four quarters of Grain, which is but two and thirty bushels, cannot be afforded under twenty shillings) so likewise they are very casual and apt to mischance and spilling; for, and besides their ordinary wearing, if in the heat of Summer they be never so little neglected without water, and suffered to be over-dry, it is ten to one but in the Winter they will be ready to fall in pieces; and if they be kept moist, yet if the water be not oft shifted and preserved sweet, the Fatt will soon taint, and being once grown faulty, it is not only irrecoverable, but also whatsoever cometh to be steeped in it after, will be sure to have the same savour; besides the wearing and breaking of Garthes and Plugs, the binding, cleansing, sweetning, and a whole world of other troubles and charges doth so daily attend them, that the benefit is a great deal short of the incumbrance; whereas the Stone-Cistern is ever ready and usefull, without any vexation at all; and being once well and sufficiently made, will not need trouble or reparation, (more than ordinary washing) scarce in a hundred years.

Now the best way of making these Malt-Cisterns, is to make the bottoms and sides of good tyle-shreads fixed together with the best Lime and Sand, and the bottom shall be raised at least a foot and a half higher than the ground, and at one corner in the bottom, a fine artificial round hole must be

be made, which being outwardly ſtopt, the Maltſter may through it drain the Ciſtern dry when ſhe pleaſeth, and the bottom muſt be ſo artificially leveld and contrived, that the water may have a true deſcent to that hole, and not any remain behind when it is opened.

Now when the model is thus made of tile-ſhard, which you may do great or little at your pleaſure: then with Lime, Hair and Beaſts blood mixed together, you ſhall cover the bottom at leaſt two inches thick, laying it level and plain as is before ſhewed: which done, you ſhall alſo cover all the ſides and top both within and without with the ſame matter at leaſt a good fingers thickneſs, and the main wall of the whole Ciſtern ſhall be a full foot in thickneſs, as well for ſtrength and durableneſs, as other private reaſons for the holding the grain and water, whoſe poyſe and weight might otherwiſe endanger a weaker ſubſtance. And thus much concerning the Malt-houſe, and thoſe ſeveral accommodations which do belong unto the ſame.

The manner how to make Malt.

I will now ſpeak a little in general as touching the Art, skill and knowledge of Malt-making, which I have referred to the concluſion of this Chapter, becauſe whoſoever is ignorant in any of the things before ſpoken of, cannot by any means ever attain to the perfection of the moſt true and moſt thrifty Malt-making. To begin then with the Art of making, or (as ſome term it) melting of Malt, you ſhall firſt (having proportioned the quantity you mean to ſteep, which ſhould ever be anſwerable to the continent of your Ciſtern, and your Ciſtern to your floors) let it either run down from your upper Garner into the Ciſtern, or otherwiſe be carried into your Ciſtern, as you ſhall pleaſe, or your occaſions deſire; and this Barly would by all means be very clean and neatly dreſt; then when your Ciſtern is filled, you ſhall from your Pump or Well convey the Water into the Ciſtern till all the Corn be drench'd, and that the water float above it; If there be any Corn that will not ſink, you ſhall with your hand ſtir it about and wet it, and ſo let it reſt and cover the Ciſtern; and thus for the ſpace of three nights you ſhall let the Corn ſteep in the water. After the three

nights expired, the next morning you shall come to the Cistern and pluck out the plug or bung-stick which stoppeth the hole in the bottom of the Cistern, and so drain the water clean from the Corn, and this water you shall by all means save, for much light Corn and others will come forth with this drain-water, which is very good Swines-meat, and may not be lost by any good House-wife. Then having drained it, you shall let the Cistern drop all that day, and in the evening with your shovel you shall empty the Corn from the Cistern unto the Malt-floor, and when all is out, and the Cistern cleansed, you shall lay all the wet Corn on a great heap, round or long, and flat on the top; and the thickness of this heap shall be answerable to the season of the year; for if the weather be extreme cold, then the heap shall be made very thick, as three or four foot or more, according to the quantity of the grain: but if the weather be temperate and warm, then shall the heap be made thinner, as two foot, a foot and a half, or one foot, according to the quantity of the Grain. And this heap is called of Maltsters a Couch or bed of raw Malt.

In this Couch you shall let the Corn lye three nights more without stirring, and after the expiration of the three nights you shall look upon it, and if you finde that it beginneth but to sprout, (which is called coming of Malt) though it be never so little, as but the very white end of the sprout peeping out, (so it be in the outward part of the heap or couch) you shall then break open the couch, and in the middest where the Corn lay neerest, you shall finde the sprout or Corn of a greater largeness: then with your shovel you shall turn all the outward part of the couch inward, and the inward outward, and make it at the least three or four times as big as it was at the first, and so let it be all that day and night, and the next day you shall with your shovel turn the whole heap over again, increasing the largeness, and making it of one indifferent thickness over all the floor, that is to say, not above a handfull thick at the most, not failing after for the space of fourteen daies, which doth make up full in all three weeks, to turn it all over twice or thrice a day, according to the season of the weather, for if it be warm, the Malt must be

turned

turned oftner; if cool, then it may lye looser, thicker and longer together, and when the three weeks is fully accomplish'd, then you shall (having bedded your Kiln, and spread a clean hair-cloth thereon) lay the Malt as thin as may be, (as about three fingers thickness) upon the hair-cloth, and so dry it with a gentle and soft fire, ever and anon turning the Malt (as it dryeth on the Kiln) over and over with your hand, till you find it sufficiently well dryed, which you shall know both by the taste when you bite it in your mouth, and also by the falling off of the Come or sprout when it is throughly dryed. Now as soon as you see the Come begin to shed, you shall in the turning of the Malt rub it well between your hand, and scowr it to make the Come fall away, then finding it all sufficiently dryed, first put out your fire, then let the malt cool upon the Kiln for four or five hours, and after raising up the four corners of the hair-cloth, and gathering the malt together on a heap, empty it with the Come and all into your Garners, and there let it lye (if you have not present occasion to use it) for a moneth or two or three to ripen, but no longer, for as the Come or dust of the Kiln for such a space melloweth and ripeneth the malt, making it better both for sale or expence, so to lye too long in it doth ingender Weevel, Worms and Vermine which do destroy the Grain. The drying of Malt.

Now for the dressing and cleansing of malt at such time as it is either to be spent in the house or sold in the Market; you shall first winnow it with a good wind either from the Air or from the Fan; and before the winnowing, you shall rub it exceeding well between your hands to get the *Come* or *sprouting* clean away: for the beauty and goodness of malt is when it is most smug, clean, bright, and likest to Barley in the view, for then there is least waste and greatest profit: for Come and dust drinketh up the Liquor, and gives an ill taste to the drink. After it is well rubb'd and winnowed, you shall then ree it over in a fine sieve, and if any of the malt be uncleansed, then rub it again into the sieve till it be pure, and the rubbings will arise on the top of the sieve, which you may cast off at pleasure, and both those rubbings from the sieve, and the chaff, and dust which cometh from the win-

nowings should be safe kept; for they are very good Swines-meat, and feed well, mixt either with whey or swillings, and thus after the malt is ree'd, you shall either sack it up, for especial use, or put it into a well cleansed Garner, where it may lye till there be occasion for expence.

Now there be certain Observations in the making of Malt, which I may by no means omit: for though divers opinions do diversly argue them, yet as neer as I can, I will reconcile them to that truth which is most consonant to reason, and the rule of honesty and equality.

First, there is a difference in mens opinions, as touching the constant time for the mellowing and making of the malt; that is, from the first steeping untill the time of drying: for some will allow both Fatt and Floor hardly a fortnight, some a fortnight and two or three daies, and do give this reason.

First, they say, it makes the Corn look whiter and brighter, and doth not get so much the sulling and fowlness of the floor, as that which lyeth three weeks, which makes it a great deal more beautifull, and so more saleable: Next, it doth not come or shoot out so much sprout as that which lyeth a longer time, and so preserveth more heart in the grain, makes it bold and fuller, and so consequently more full of substance, and able to make more of a little than the other of much more.

These reasons are good in shew, but not in substantial truth: for (although I confess that corn which lyeth least time on the floor, must be the whitest and brightest,) yet that which wanteth any of the due time, can neither ripen, mellow, nor come to true perfection, and less than three weeks cannot ripen Barley; for look what time it hath to swell and sprout, it must have full that time to flourish, & as much time to decay, now in less than a week it cannot do the first, and so in a week the second, and in another week the third; so that in less than three weeks a man cannot make perfect malt. Again, I confess, that malt which hath the least Come must have the greatest kernel, & so be most substantial; yet the malt

which

which putteth not out his full ſprout but hath that moyſture (with too much haſte) driven in which ſhould be expelled, can never be Malt of any long laſting, or profitable for indurance, becauſe it hath ſo much moiſt ſubſtance as doth make it both apt to corrupt and breed worms in moſt great abundance. It is moſt true, that this haſty made Malt is faireſt to the eye, and will ſooneſt be vented in the Market; and being ſpent as ſoon as it is bought, little or no loſs is to be perceived; yet if it be kept three or four months longer (unleſs the place where it is kept, be like a hot-houſe) it will be ſo dank and give again, that it will be little better than raw Malt, and ſo good for no ſervice without a ſecond drying.

Beſides, Malt that is not ſuffered to ſprout to the full kindly, but is ſtopt as ſoon as it begins to peep, much of that Malt cannot come at all; for the moiſteſt grains do ſprout firſt, and the hardeſt are longer in breaking the huſk; now, if you ſtop the grain on the firſt ſprouts, and not give all leiſure to come one after another, you ſhall have half Malt and half Barley, and that is good for nothing but Hens and the Hoggs trough. So that to conclude, leſs then three weeks you cannot have to make good and perfect Malt.

Next, there is a difference in the turning of the Malt, for ſome (and thoſe be the moſt Men-malſters whatſoever) turn all their Malt with the ſhovel, and ſay it is more eaſie, more ſpeedy, and diſpatcheth more in an hour, then any other way doth in three; and it is very true, yet it ſcattereth much, behind unturn'd, and commonly that which was undermoſt it leaveth undermoſt ſtill, and ſo by ſome coming too much and others not coming at all, the Malt is of much imperfect, and the old ſaying made good, *that too much haſte maketh waſte.* Now, there are others (and they are for the moſt part Women-malſters) which turn all with the hand, and that is the beſt, ſafeſt, and moſt certain way; for there is not a grain which the hand doth not remove, and turn over and over, and layes every ſeveral heap or row of ſuch an even and juſt thickneſs, that the Malt both equally cometh, and equally ſeaſoneth together without defect or alteration; and though he that

hath

hath much Malt to make, will be willing to hearken to the swiftest course in making, yet he that will make the best Malt, must take such convenient leisure, and imploy that labour which cometh neareſt to perfection.

Then there is another especial care to be had in the comming or sprouting of Malt, which is, that as it must not come too little, so it must not by any means come too much, for that is the grossest abuse that may be; and that which we call comed or sprouted too much, is, when either by negligence, for want of looking to the couch and not opening of it, or for want of turning when the Malt is spread on the floor, it comes or sprouts at both ends, which Husbands call Aker-spired: such corn, by reason the whole heart or substance is driven out of it, can be good for no purpose but the Swine-trough, and therefore you must have an especial care both to the well tending of the couch, and the turning the Malt on the floor, and be sure (as near as you can) by the ordering of the couch, and heaping the hardest grain inward and warmest, to make it all come very indifferently together. Now, if it so fall out, that you buy your Barley, and happen to light on mixt grain, some being old corn, some new corn, some of the heart of the stack, and some of the staddle, which is an ordinary deceit with Husbandmen in the Market, then you may be well assured, that this grain can never come nor sprout equally together, for the new corn will sprout before the old, and the staddle before that in the heart of the stack, by reason the one exceedeth the other in moystness: therefore in this case you shall mark well which cometh first, which will be still in the heart of the couch, and with your hand gather it by it self into a separate place, and then heap the other together again: and thus as it cometh and sprouteth, so gather it from the heap with your hand, and spread it on the floor, and keep the other still in a thick heap till all be sprouted. Now lastly observe, that if your Malt be hard to sprout or come, and that the fault consist more in the bitter coldness of the season, than any defect of the corn, that then (besides the thick or close making of the heap or couch) you fail not to cover it over with some thick woollen clothes, as course Coverlids, or such like stuff, the warmth

warmth whereof will make it come presently; which once perceived, then forthwith uncloath it, and order it as aforesaid in all points. And thus much for the Art, Order, Skill, and Cunning, belonging to Malt-making.

Of Oat-malt.

Now as touching the making of Oats into Malt, which is a thing of general use, in many parts of this Kingdome where Barley is scarce, as in *Cheshire*, *Lancashire*, much of *Darbishire*, *Devenshire*, *Cornwall*, and the like, the Art and Skill is all one with that of Barley, nor is there any variation or change of work, but one and the same order still to be observed; only by reason that Oats are more swift in sprouting, and apt to clutter, ball and hang together by the length of the sprout than Barley is, therefore you must not fail but turn them oftner than Barley, and in the turning be careful to turn all and not leave any unmoved. Lastly, they will need less of the floor than Barley will; for in a full fortnight, or a fortnight and two or three dayes you may make very good and perfect Oat-malt. But because I have a great deal more to speak particularly of Oats in the next Chapter, I will here conclude this, and advise every skilful House-wife to joyn with mine observations, her own tryed experience, and no doubt but she shall find both profit and satisfaction.

CHAP. VIII.

Of the Excellency of Oats, and the many singular vertues and use of them in a Family.

OAtes although they are of all manner of grain the cheapest because of their generality, being a grain of that goodness and hardness, that it will grow in any soyl whatsoever, be it never so rich, or never so poor, as if nature had made it the only loving companion and true friend to mankind; yet it is a grain of that singularity for the multiplicity of vertues, and necessary uses for the sustenance and support of the Family, that not any other grain is to be compared with it; for if any other have equal vertue, yet it hath not equal value, and if not equal value,

then

then it wants many degrees of equal vertue; so that joyning vertue & value together, no *Husband*, *House-wife*, *or House-keeper* whatsoever, hath so true and worthy a friend, as his Oats are.

The vertue of Oats to Cattel.

To speak then first of the vertues of Oats as they accrew to Cattel and Creatures without doors, and first to begin with the Horse, there is not any food whatsoever that is so good, wholesome and agreeable with the nature of a Horse as Oats are, being a provender in which he taketh such delight, that with it he feedeth, travelleth, and doth any violent labour whatsoever, with more courage and comfort, then with any other food that can be invented, as all men know that have either use of it, or Horses: neither doth the Horse ever take surfeit of Oats (if they be sweet and dry) for albeit, he may well be glutted, or stalled upon them with indiscreet feeding, and so refuse them for a little time, yet he never surfeiteth, or any present sickness will follow after: whereas no other grain but gluts a Horse therewith, and instantly sickness will follow, which shewes surfeit; and the danger is oft incurable: for we read in *Italy*, at the siege of *Naples* of many hundred Horses that dyed on the surfeit of Wheat; at *Rome* also dyed many hundred Horses of the plague, which by due proof was found to proceed from a surfeit taken of Peason, and Fitches; and so I could run over all other grains, but it is needless, and far from the purpose I have to handle; suffice it, Oats for Horses are the best of all foods whatsoever, whether they be but only clean thrasht from the straw and so dryed, or converted to Oat-meal, and so ground and made into bread. Oats boyl'd, and given a Horse whilst they are cool, and sweet, are an excellent food for any Horse in the time of disease, poverty or sickness; for they scour and fat exceedingly.

In the same nature that Oats are for Horses, so are they for the Ass, Mule, Camel, or any other beast of burthen.

If you will feed either Oxe, Bull, Cow, or any Neat whatsoever to an extraordinary height of fatness, there is no food doth it so soon as Oats do, whether you give them in the straw, or clean thrasht from the sheaf, and well winnowed; but the winnowed Oat is the Best; for by them I have seen an Oxe, fed to twenty pounds, twenty four pounds, and thirty pounds, which is a most unreasonable reckoning for any beast; only seam, and the tallow hath been precious.

Sheep

Sheep or Goats may likewise be fed with Oates, to as great price and profit as with Peaſe, and Swine are fed with Oates either in raw Milt or otherwiſe, to as great thickneſs as with any graine whatſoever; only they muſt have a few Peaſe after the Oats to harden the fat, or elſe it will waſte, and conſume in boyling. Now for holding Swine, which are onely to be preſerved in good fleſh, nothing is better then a thin mange made of ground Oats, Whey, Butter-milk, or other ordinary waſh or ſwillings, which either the Dairy or Kitchin affordeth; nor is there any more ſoveraign or excellent meat for Swine in the time of ſickneſs, then a mange made of ground Oats and ſweet Whey, warmed luke-warm on the fire, and mixt with the powder of Ruddle, or red Oaker. Nay if you will go to the matter of pleaſure, there is not any meat ſo excellent for the feeding, and wholſome keeping of a kennel of Hounds, as the Mange made of ground Oats and ſcalding water, or of beef broth, or any other broth, in which fleſh hath been ſodden; if it be for the feeding, ſtrengthning and comforting of Grey-hounds, Spaniels, or any other ſort of tenderer Dogs, there is no meat better than ſheeps heads, hair and all, or other intrails of Sheep chopt and well ſodden with good ſtore of oat-meal.

Now for all manner of Poultry, as Cocks, Capons, Hens, Chickens of great ſize, Turkeys, Geeſe, Ducks, Swanns, and ſuch like, there is no food feedeth them better than Oats, and if it be the young breed of any of thoſe kinds, even from the firſt hatching or diſcloſing, till they be able to ſhift for themſelves; there is no food better whatſoever then Oat-meal Groats, or fine Oat-meal, either ſimple of it ſelf, or elſe mixt with Milk, drink, or elſe new made Urine.

Thus much touching the vertues and quality of Oates or Oat-meal, as they are ſerviceable for the uſe of Cattel and Poultry. Now for the moſt neceſſary uſe thereof for man, and the general ſupport of the family, there is no grain in our knowledge anſwerable unto it. Vertue of Oats for man.

Firſt for the ſimple Oat it ſelf (excepting ſome particular phyſick helps, as frying them with ſweet butter, & putting them in a bag, & very hot applyed to the belly, or ſtomach, to avoid collick or windines & ſuch experiments) the moſt ſpecial uſe which is made of them

is for Malt to make Beer or Ale of, which it doth exceeding well: and maintaineth many Towns and Countries; but the Oatmeal which is drawn from them, being the heart and kernel of the Oat is a thing of much rarer price and estimation; for to speak truth, it is like Salt of such a general use, that without it hardly can any Family be maintained: therefore I think it not much amiss to speak a word or two, touching the making of Oat-meal. You shall understand then,

Making of Oat-meal.

that to make good and perfect Oat-meal, you shall first dry your Oats exceeding well; & then put them on the Mil, which may either be water-mill, wind-mill, or horse-mill (but the Horse mill is best) & no more but crush or hull them; that is, to carry the stones so large that they may no more but crush the husk from the Kernel: then you shall winnow the hulls from the Kernels either with the wind, or a Fan, and finding them of an indifferent cleanness (for it is impossible to hull them all clean at the first) you shall then put them on again, and making the mill go a little closer, run them through the Mill again, and then winnow them over again, and such Greets or Kernels as are clean hul'd, and well cut, you may lay by, and the rest you shall run through the mill again the third time, and so winnow them again, in which time all will be perfect, and the Greets or full Kernels will seperate from the smaller Oatmeal; for you shall understand, that at this first making of Oat meal, you shall ever have two sorts of Oat-meales, that is, the full whole Greet or Kernel, and the small dust Oat-meal: As for the course Hulls or Chaff that cometh from them, that also is worthy saving; for it is an excellent good Horse provender for any plow or labouring Horses, being mixt with either beans, pease, or any other pulse whatsoever.

The vertues of Oatmeal.

Now for the use and vertues of these severall kinds of Oat meals in maintaining the family, they are so many (according to the many customs of many Nations) that it is almost impossible to reckon all; yet (as near as I can) I will impart my knowledge, and what I have taken from relation.

First, for the small dust, or meal Oat-meal, it is that with which all pottage is made and thickned, whether they be meat pottage, Milk pottage, or any thick, or else thin Grewel whatsoever, of whose goodness and wholsomness it is needless to speak, in that it is frequent with every experience: Also, with this small

meat

meal Oat-meal, is made in divers Countries six several kinds of very good and wholesome bread, every one finer than another, as your Anacks, Janacks, and such like. Also there is made of it, both thick and thin Oaten cakes, which are very pleasant in taste, and much esteemed: but if it be mixed with fine wheat-meal, then it maketh a most delicate and dainty Oat cake, either thick or thin, such as no Prince in the world but may have them served to his Table; also this small Oat-meal mixed with blood, and the Liver of either Sheep, Calfe, or Swine, maketh that pudding which is called the Haggas or Haggus, of whose goodness it is in vain to boast, because there is hardly to be found a man that doth not affect them. And lastly, from this small Oat-meal by oft steeping it in water and cleansing it, and then boyling it to a thicke and stiffe jelly, is made that excellent dish of meat which is so esteemed of in the west parts of this Kingdome, which they call Wash-brew, and in *Cheshire*, and *Lancashire* they call it Flamery, or Flumery, the wholesomness and rare goodness, nay, the very Physick helps thereof, being such and so many, that I my selfe have heard a very reverend and worthily renowned Physitian speak more in the commendations of that meat, than of any other food whatsoever: and certain it is, that you shall not heare of any that ever did surfeit of this Wash-brew or Flamery; and yet I have seen them of very dainty and sickly stomachs which have eaten great quantities thereof beyond the proportion of ordinary meats. Now for the manner of eating this meat, it is of divers diversly used; for some eat it with Honey, which is reputed the best sauce; some with Wine, either Sack, Claret or White; some with strong Beer, or strong Ale, and some with Milk, as your ability, or the accommodations of the place will administer.

Now there is derived from this Wash-brew another courser meat which is as it were the dregs, or grosser substance of the Wash-brew, which is called Gird-brew, which is a well filling and sufficient meat, fit for servants and men of labour; of the commendation whereof, I will not much stand, in that is a meat of harder digestion, and fit indeed but for strong able stomachs, and such whose toyl and much sweat both

liberally spendeth evill humours, and also preserveth men the offence of fulness and surfeits.

Now for the bigger kind of Oat-meal, which is called Greets, or Corn Oat meal, it is of no less use than the former, nor are there fewer meats compounded thereof: for first, of these Greets are made all sorts of puddings, or pots (as the West Country tearms them) whether they be black, as those which are made of the blood of Beasts, Swine, Sheep, Geese, Red or Fallow Deer, or the like, mixt with whole Greets, Suet, and wholsome hearbs; or else white, as when the Greets are mixt with good Cream, Eggs, Bread-crums, Suet, Currants, and other wholsome Spices. Also of these Greets is made the good Friday pudding, which is mixt with Egges, Milk, Suet, Penny-royal; and boyl'd first in a linnen bag, and then stript and buttered with sweet butter. Again, if you roast a Goose, and stop her belly with whole Greets beaten together with Eggs, and after mixt with the Gravy, there cannot be a more better or pleasanter sawce: Nay, if a man be at Sea in any long Travel, he cannot eat a more wholsome and pleasant meat then these whole Greets boyled in water till they burst, and then mixt with butter, and so eaten with spoons, which although Seamen call it simply by the name of Loblolly, yet there is not any meat, how magnificent soever the name be, that is more toothsome or wholsome. And to conclude, there is no way or purpose whatsoever to which a man can use or imploy Rice, but with the same seasoning and order you may imploy the whole Greets of Oat-meal, and have full as good and wholesome meat, and as well tasted; so that I may well knit up this Chapter with this approbation of Oat-meal, that the little charge and great benefit considered, it is the very Crown of the Housewifes Garland, and doth more grace her Table and her Knowledge, then all grains whatsoever; neither indeed can any Family or Houshold be well and thriftily maintained, where this is either scant or wanting. And thus much touching the nature, worth, vertues, and great necessity of Oats, and Oat-meal.

CHAP.

CHAP. IX.

Of the office of the Brew-house, and the Bake-house, and the necessary things belonging to the same.

WHen our *English House-wife* knows how to preserve health by wholesome Physick, to nourish by good meat, and to cloath the body with warm garments, she must not then by any means be ignorant in the provision of bread and drink; she must know both the proportions and compositions of the same. And for as much as drink is in every house more generally spent than bread, being indeed, (but how well I know not) made the very substance of all entertainment; I will first begin with it, and therefore you shall know that generally our Kingdome hath but two kinds of drinks, that is to say, Beer and Ale, but particularly four, as Beer, Ale, Perry, and Cider; and to these we may adde two more, Mede, and Metheglin, two compound drinks of Hony and Herbs, which in the places where they are made, as in *Wales*, and the Marches, are reckoned for exceeding wholesome and cordiall. Diversities of Drinks.

To speak then of Beer, although there be divers kinds of tasts and strength thereof, according to the allowance of Malt, hops, and age given unto the same; yet indeed there can be truly said to be but two kinds thereof, namely, Ordinary beer and March beer, all other beers being derived from them. Strong beer.

Touching ordinary beer, which is that, wherewith either Nobleman, Gentleman, Yeoman, or Husbandman, shall maintain his Family the whole year; it is meet first that our *English House-wife* respect the proportion or allowance of Malt due to the same, which amongst the best *Husbands*, is thought most convenient; and it is held, that to draw from one quarter of good malt three hogsheads of beer, is the best ordinary proportion that can be allowed, and having age and good caske to lye in, it will be strong enough for any good mans drinking. Of ordinary beer.

Now for the brewing of ordinary beere, your malt being well Of brewing ordinary beer.

well ground, and put in your mash-fat, and your Liquor of your lead ready to boyle, you shall then by little and little with scoopes or pailes put the boyling Liquor to the Malt, and then stir it even to the bottom exceedingly well together, which is called the mashing of the malt, then the Liquor swimming in the Top, cover all over with more malt; and so let it stand an hour and more in the mash-fat, during which space you may if you please, heat more Liquor in your lead for your second or small drink, this done, pluck up your mashing stroam, and let the first Liquor run gently from the malt, either in a clean trough, or other vessels prepared for the purpose, and then stopping the mash fat again, put the second Liquor to the malt, and stir it well together; then your Lead being emptied, put your first Liquor or wort therein, and then to every quarter of malt, put a pound and a halfe of the best Hops you can get, and boile them an hour together, till taking up a dish full thereof, you see the Hops shrink into the bottom of the dish; this done, put the wort through a straight Seive, which may drain the Hops from it into your cooler, which standing over the Guile-fat, you shall in the bottom thereof, set a great bowl with your barm, and some of the first wort (before the Hops come into it mixt together) that it may rise therein, and then let your wort drop or run gently into the dish with the barm which stands in the Guile-fat, and this you shall doe the first day of your brewing, letting your cooler drop all the night following, and some part of the next morning, and as it drops if you find that a black skum or mother riseth upon the barm, you shall with your hand take it off, and cast it away, then nothing being left in the cooler, and the Beer well risen, with your hand stir it about, and so let it stand an hour after, and then beating it and the barme exceeding well together, tun it up into the Hogsheads, being clean wash'd and scalded, and so let it purge; and herein you shall observe not to Tun your vessels too full, for fear thereby it purge too much of the barm away: when it hath purged a day and a night, you shall close up the bung-holes with Clay, and onely for a day or two after, keep a vent-hole in it, and after close it up as fast as may be. Now for your second or small drink

drink which are left upon the graines you ſhall ſuffer it there to ſtay but an hour, or a little better, and then drain it all off alſo; which done, put it into the Lead with the former Hops, and boyl the other alſo, then clear it up from the Hops and cover it very cloſe, till your firſt Beer be Tunned, and then, as before, put it alſo to barm, and ſo tun it up alſo in ſmaller veſſels, and of this ſecond beer you ſhall not draw above one Hogſhead to three of the better. Now there be divers other wayes and obſervations, for the brewing of ordinary beer; but none ſo good, ſo eaſie, ſo ready and quickly performed, as this before ſhewed; neither will any beer laſt longer, or ripen ſooner, for it may be drunk at a fortnights age, and will laſt as long and lively.

Of brewing the beſt march beer.

Now for the brewing of the beſt March Beer, you ſhall allow to a Hogſhead thereof, a quarter of the beſt Malt well ground; then you ſhall take a Peck of Peaſe, half a peck of Wheat, and half a peck of Oats, and grind them all very well together, and then mix them with your Malt; which done, you ſhall in all points brew this beer, as you did the former ordinary beer; onely you ſhall allow a pound and a halfe of Hops to this one Hogſhead: add whereas before you drew but two ſorts of beer, ſo now you ſhall draw three; that is, a Hogſhead of the beſt, and a Hogſhead of the ſecond, and half a Hogſhead of ſmall beer, without any augmentation of Hops or Malt.

This March beer would be brewed in the months of *March* or *April*, and ſhould (if it have right) have a whole year to ripen in: it will laſt two, three, or four years, if it lye cool; and endure the drawing to the laſt drop, though with never ſo much leiſure.

Now for the brewing of ſtrong Ale, becauſe it is drink of no ſuch long laſting as beer is, therefore you ſhall brew leſſe quantity at a time thereof, as two buſhels of Northern meaſure, (which is four buſhels, or half a quarter in the South) at a brewing and not above, which will make fourteen gallons of the beſt Ale. Now for the maſhing and ordering of it in the maſh fat, it will not differ any thing from that of

beer

beer : as for Hops, although some use not to put in any, yet the best Brewers thereof will allow to fourteen gallons of Ale a good espen full of Hops and no more, yet before you put in your hops, as soon as you take it from the grains, you shall put it into a vessel, and change it, or blink it, in this manner: put into the wort a handful of Oak-boughs, and a pewter-dish, and let them lye therein till the wort look a little paler than it did at the first, and then presently take out the dish and the leaves, and then boyl it a full houre with the hops, as aforesaid, and then cleanse it, and set it in vessels to cool; when it is milk-warme, having set your barm to rise with some sweet wort, then put all into the guile-fat, and as soon as it riseth, with a dish or bowl beat it in, and so keep it with continual beating a day and a night at least, and after tun it. From this Ale you may also draw half so much very good middle Ale, and a third part very good small Ale.

Brewing of bottle Ale.

Touching the brewing of Bottle-Ale, it differeth nothing at all from Brewing of strong Ale, onely it must be drawne in a larger proportion, as at least twenty gallons of half a quarter; and when it comes to be changed, you shall blink it (as was before shewed) more by much than was the strong Ale, for it must be pretty and sharp, which giveth the life and quickness to the Ale : and when you tun it, you shall put it into round bottles with narrow mouths, and then stopping them close with cork, set them in a cold Cellar up to the waste in sand, and be sure that the corks be fast tied in with strong packthread, for fear of rising out, or taking vent, which is the utter spoyl of the Ale.

Now for the small drink arising from this bottle-Ale, or any other Beer or Ale whatsoever, if you keep it after it is blink'd and boyled in a close vessel, and then put it to barm every morning as you have occasion to use it, the drink will drink a great deal the fresher, and be much more lively in taste.

Of making Perry or Cider.

As for the making of Perry and Cider, which are drinkes much used in the West parts, and other Countries well stored with fruit in this Kingdome; you shall knowe that your

your Perry is made of Pears only, and your Cider of Apples; and for the manner of making thereof, it is done after one fashion, that is to say, After your Pears and Apples are well pick'd from the stalks, rottenness, and all manner of other filth, you shall put them in the Press-mill, which is made with a Mill-stone running round in a Circle, under which you shall crush your Pears or Apples, and then straining them thorow a bag of hair-cloth, tun up the same, (after it hath been a little setled) into Hogsheads, Barrels, and other close vessels.

Now after you have prest all, you shall save that which is within the hair-cloth bag, and putting it into several vessels, put a pretty quantity of Water thereunto, and after it hath stood a day or two, and hath been well stirred together, press it also over again, for this will make a small Perry or Cider, and must be spent first. Now of your best Cider, that which you make of your Summer or sweet fruit, you shall call Summer, or sweet Cyder or Perry, and that you shall spend first also; and that which you make of the Winter and hard Fruit, you shall call Winter, and sowr Cider or Perry, and that you may spend last, for it will endure the longest.

Of Baking.

Thus after our *English House-wife* is experienc'd in the brewing of these several drinks, she shall then look into her Bake-house, and to the making of all sorts of Bread, either for Masters, Servants, or Hinds, and to the ordering and compounding of the meal for each several use.

Ordering of Meal.

To speak then first of meals for Bread, they are either simple or compound; simple, as Wheat, and Rye; or compound, as Rye and Wheat mixt together; or Rye, Wheat and Barley mixt together: and of these the oldest meal is ever the best, and yieldeth most, so it be sweet, and untainted; for the preservation whereof, it is meet that you cleanse your meal well from the Bran, and then keep it in sweet vessels.

Baking Manchets.

Now for the baking of Bread of your simple meals, your best and principal Bread is Manchet, which you shall bake in this manner: First, your Meal being ground upon the black stones, if it

be possible, which makes the whitest flower, and boulted through the finest boulting cloth, you shall put it into a clean Kimnel, and opening the flower hollow in the midst, put into it of the best Ale Barm, the quantity of three pints to a bushel of meal, with some Salt to season it with; then put in your Liquor reasonable warm, and knead it very well together with both your hands, and through the brake; or for want thereof, fold it in a cloth, and with your feet tread it a good space together, then letting it lye an hour or thereabouts, to swell, take it forth, and mould it into Manchets round and flat, scotch them about the waste to give it leave to rise, and prick it with your knife in the Top, and so put it into the Oven, and bake it with a gentle heat.

To bake the best Cheat Bread, which is also simply of Wheat onely, you shall after your meal is dreſt and boulted through a more course boulter than was used for your Manchets, and put also into a clean Tub, Trough or Kimnel, take a sowr Leaven, that is, a piece of such like Leaven saved from a former batch, and well fill'd with Salt, and so laid up to sowr; and this sowr Leven you shall break into small pieces into warm water, and then strain it; which done, make a deep hollow hole, as was before said, in the midst of your flower, and therein pour your strained Liquor, then with your hand mixe some part of the flower therewith, till the Liquor be as thick as a Pancake batter, then cover it all over with meal, and so let it lye all that night, the next morning stir it, and all the rest of the meal well together, and with a little more warm water, barm, and salt to season it with, bring it to a perfect Leaven, stiffe and firm; then knead it, break it, and tread it, as was before said in the Manchets, and so mould it up in reasonable big Loaves, and then bake it with an indifferent good heat: and thus according to these two examples before shewed, you may bake Levened or unlevened Bread whatsoever, whether whether it be simple Corn, as Wheat or Rye of it self; or compound Grain, as Wheat and Rye, or Wheat and Barley, or Rye and Barley, or any other mixt white Corn; only because Rye is a little stronger Grain than Wheat, it shall be good for you to put your water a little hotter than you did to your Wheat.

For

For your own Bread, or Bread for your hinde-ſervants, which is the courſeſt Bread for mans uſe, you ſhall take of Barley two buſhels, of Peaſe two pecks, of Wheat or Rye a peck, a peck of Mault: theſe you ſhall grind all together, and dreſs it through a Meal ſieve, then putting it into a ſowr trough, ſet Liquor on the fire, and when it boyls, let one put in the water, and another with a maſh rudder ſtirre ſome of the flower with it after it hath been ſeaſoned with ſalt, and ſo let it be till the next day, and then putting to the reſt of the flower, work it up into ſtiffe Leven, then mould it, and bake it into great Loaves with a very ſtrong heat; now if your trough be not ſowr enough to ſower your Leven, then you ſhall either let it be longer in the trough, or elſe take the help of a ſowr Leven with your boyling water; for you muſt underſtand, that the hotter your Liquor is, the leſs will the ſmell or rankneſs of the Peaſe be perceived. And thus much for the baking of any kind of bread, which our *Engliſh Houſe-wife* ſhall have occaſion to uſe for the maintenance of her Family.

As for the general Obſervations to be reſpected in the Brew-Houſe, or Bake-houſe, they be theſe: Firſt, that your Brew-houſe be ſeated in ſo convenient a part of the houſe, that the ſmoke may not annoy your other more private rooms; then that your Furnace be made cloſe and hollow for ſaving fewel, and with a vent for the paſſage of ſmoke, leſt it taint your Liquor; then that you prefer a Copper before a Lead: next, that your Maſh-fat, be ever neareſt to your Lead, your cooler nearer your Maſh-fat, and your Guil-fat under your Cooler, and adjoyning to them all ſeveral clean tubs to receive your Worts and Liquors: Then in your Bake-houſe, you ſhall have a fair boulting-houſe, with large Pipes to boult Meal in, fair Troughs to lay Leven in, and ſweet Safes to receive your Bran; you ſhall have Boulters, Searſes, Ranges, and Meal-ſieves of all ſorts, both fine and courſe; you ſhall have fair Tables to mould on, large Ovens to bake in, the ſoales thereof, rather of one or two intire ſtones, than of many bricks, and the mouth made narrow, ſquare, and eaſie to be cloſe covered: As for your Peels, Cole-rakes, Maukins, and ſuch like, though they be neceſſary, yet they are of ſuch gene-

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ral use they need no further relation. And thus much for a full satisfaction to all the *Husbands* and *House-wives* of this Kingdome, touching Brewing, Baking, and all whatsoever else appertaineth to either of their Offices.

The End of the English House-wife.

FINIS.

THE INRICHMENT Of the Weald of KENT.

OR,

A Direction to the HUSBANDMAN,

For the true Ordering, Manuring, and Inriching of all the Grounds within the Wealds of *Kent*, and *Sussex*; and may generally serve for all the Grounds in *England* of that Nature: As

1. *Shewing the nature of Wealdish Ground, comparing it with the Soyl of the Shires at large.*
2. *Declaring what the Marle is, and the several sorts thereof, and where it is usually found.*
3. *The profitable use of Marle, and other rich manuring, as well in each sort of Arable Land, as also for the encrease of Corn and Pasture through the Kingdome.*

Painfully gathered for the good of this Island, by a Man of great Eminence and Worth; But revised, enlarged, and corrected with the consent, and by conference with the first Author.

By *G. M.*

LONDON,

Printed by *J. Streater*, for *George Sawbridge*, Dwelling on *Clarken-well-Green*, 1668.

TO THE

Honourable Knight,

Sir *GEORGE RIVERS*

of *Chafford*, in the County of *Kent*.

SIR,

HAd I no Scale (*more then this bare and plain moulded Epistle,*) *by which to come to your worthy Ears, yet in respect of the honest Livery which it carries,* (*being necessary and husbandly Collections, especially gathered for the Country and Soyl wherein you live:*) *I know it cannot chuse but find both favour and mercy in your acceptions; but when I call into my consideration the great worthiness of your expence in this and all other the like affairs, which tend to the general benefit of the Common-wealth, and weigh the Excellency of your Wisdome, Judgment, Bounty, and Affection unto Hospitality* (*which giveth both strength and advancement to Projects of this nature*) *I could not but take unto my self a double encouragement, and boldly say unto this Work which I offer unto your goodnesse,* Go and approach with all thy sweetnes before him, he that so perfectly knowes all which thou canst or wouldst discover; he that is able both to correct and amend any thing that is imperfect in thee, he, for Vertues sake, will never forsake thee. *Believe me* (*Worthy Sir*) *should this Subject wish it self a Patron, I do not think it could wish beyond you; for you*

are a Volume ſhall of all that of which it Treateth: Witneſs your Years, your Supportation of the Poor, and your continual Employment; with any of which there is not (of your rank) a ſecond living in your Country, to walk hand in hand with you. Being then [dear Sir] the oldeſt and beſt Friend to your Country, forſake neither nor this which comes to ſerve it; and though in this Glaſs, ſome lineaments may appear imperfect, yet by the help of your Favour, (though little be exact, or moſt excellent) nothing ſhall be groſs or unworthy the ſurvey of your worthier Patience. And ſo I reſt,

Yours to be commanded,

Gervaſe Markham.

A Discourse of the Weald of Kent; *and a Comparison of Arable Lands therein, with the other parts of the Shire. Together with some necessary Counsels for the Ordering and Inriching of the Marleable Lands in the* Weald, *as generally in any part of this Kingdome.*

THe Weald of *Kent* is the lower part of that Shire, lying on the South side thereof, and adjoyneth to the Weald of *Sussex*, to the West. Further Additions.

The Weald both in *Kent* and *Sussex*, was sometimes all (or the most part) Woody, Wild, and (in the first times) uninhabited, and from thence took the name of Weal from the *Saxon* word *Weale*, or *Yeale*, or *Weald*, which signifieth a Woody Country, or Forrest like ground. The *Brittains* called it *Andred*, which signifieth *Greatnesse* or *Wonderful*, and in Latine it was called *Saltus Andred*, (that is to say) the Chase or Forrest of *Andred*, by reason of the great Circuit or large Bounds thereof.

Touching the true boundary or limits of this Weald, there have been divers Opinions, and most of them various, and much differing both in place and quantity, but that which is the neareſt and best allied unto truth both according to the Opinions of *Asserius Menevensis*, *Henry of Huntingdon*, and others of most credible report, is, that it extendeth from the City of *Winchelsey* in *Sussex* an hundred and twenty miles in length towards the West, and thirty miles in breadth towards the North. Now although this report be most agreeing unto verity, yet who knowes not that Curiosity may raise up many Objections to withstand it: and therefore Mr. *Lambert* in his Perambulation of *Kent*, hath prescribed the best and most infallible way to find out the true and

certain bounds of this Weald, to be onely by Jury, or the Verdict of twelve men impannelled for that purpose, either in case of controversie, or other particular search; and this hath been in these later times brought forth most plentifully: for it hath been found by divers late Verdicts, upon special and most necessary occasions, than the Weald of *Kent* is truly, Mr. *Lamberts* second step in his Perambulation of *Kent*, reaching from *Winchelsey* in *Sussex*, and that Hill there, unto the top of *Rivers* Hill in *Kent*; and neither farther towards *London*, nor shorter towards *Tunbridge*; which agreeth so perfectly with the former limitations, that both may be received as most true and sufficient.

This Weald was for many years held to be a Wild Desart, or most unfruitful Wilderness (as write the Authors before mentioned) and indeed such is the nature and disposition of the Soyl thereof to this very day: for it will grow to frith or wood, if it be not continually manured and laboured with the plough, and kept under by tillage; so as it may truly be said of it, *Inculta repa[s]cantur vomere Sylva*. It is throughout (except in very few places adjoyning to Brooks or Rivers) of a very barren nature, and unapt either for pasturage or tillage, untill that it be holpen by some manner of comfort, as dung, marle, fresh earth, fodder, ashes, or such other refreshings; and that seemeth to have been the cause for which in old time it was used as a Wilderness, and kept for the most part with Herds of Deer, and droves of Hogs, as is specified in divers historical relations.

And as there be yet remaining in *Sussex* divers great Forrests and sundry Commons or Wasts, having five or six miles in length, which for the most part are not fit to be manured for Corn, and yieldeth but little profit in Pasture; so have there been also in *Kent* (within our memory) a great number of Woody and overgrown ground, converted of late, even after such a manner as in the said Perambulation is testified; where it is said, That although the Weald of *Kent* belonged to sundry known Owners long since, yet was it not then allotted into particular Tenancies, as the other parts of the Shire were; but it was in processe of time, by little and little gained, as men were contented to inhabit there, and to rid it of the wood. And hereof it is also, that besides sundry whole Parishes which be named Dens or low places,

ces, as *Tenterden*, *Malden*, *Beneden*, and ſundry other, there be moreover many ſmaller portions almoſt in every part of the Weald of *Kent*, which be likewiſe called Dens; as the Den of *Cranebrook* in *Cranebrook*, the Den of *Hawkhurſt* in *Hawkhurſt*, and ſuch others; the which (as it ſeemeth) were at the firſt undertaken to be manured by ſundry particular perſons, whoſe names were then taken for thoſe very Dens, and continued many years together, as by ancient evidences it doth yet appear, howſoever the age of long time hath now almoſt worn and conſumed them all out of knowledg. Neither doth the Weald of *Kent* contain ſo many great Manors or Coutts (for the proportion of the largeneſs) as the reſt of the Shire doth, but was appertaining, for a great part thereof, to ſundry of the ſe Manors which do dye at large diſperſed thorow the Shire, whereof each one had a great portion in the Weald, which both in the Book of *Doom-Day*, and in ſundry the Court-Rolls and Rentals, paſſeth by the name of Weald, and *Silva Porcorum*, or Swine gats, which were granted to divers of the Farmers and owners of ſundry Tenancies which did belong unto thoſe Dens and other Lands within the Weald.

And albeit theſe Dens be for the moſt part good large portions of Lands, that be now broken into many ſeveral poſſeſſions, ſo as the ſame one Denne ſufficeth twenty Houſholders at this day, yet it is very likely that each man at the firſt had his ſeverall Denne wholly and unbroken, whereof he and his poſterity beareth name, untill that the ſame was by the Cuſtome of *Gavel-kind*, by ſale or by exchange divided and diſtributed amongſt others into parts, as we do now ſee them. But howſoever this Weald be of it ſelf unfruitful (as I ſaid) and of a barren Nature, yet ſo it hath pleaſed the Providence of the Almighty to temper the ſame, that by the benefit of Mangle or Marle (as it is commonly called) it may be made not onely equal in fertility with the other Grounds of the Shire, as well for Corn as Graſs, but alſo ſuperiour to the more and greater part of the ſame. The which manner of bettering the ground is not now newly diſcovered, but was the ancient practiſe of our forefathers many years ago, as by the innumerable Marle-Pits digged and ſpent ſo many years paſt, the

The uſe of Marle is ancient.

Trees

Trees of 200, or 300 years old, do now grow upon them, it may moſt evidently appear; Beſides the which, we have mention of Marle in Books of Gainage or Husbandry, that were written in the dayes of K. *Edward* the 2d. or before, howbeit the ſame manner of tillage, by means of the Civil Warrs, maintained many years as well in the time of the Baron Warrs, as of the Warrs between the Houſe of *York*, and the Family of *Lancaſter*, was ſo given over, and gone out of uſe, untill theſe thirty or forty years, that it may be ſaid to have been then newly born and revived, rather than reſtored, becauſe the very true art of inriching the ground by Marle, ſeemeth to lye hidden in part, as yet not to be diſcovered to the full: for in this ſhort time we have ſeen many Arable grounds, which for ſundry years after the marling of them, have plentifully born Wheat and other grain, to be now become unfruitful, and ſo will they continue, albeit they ſhould be now marled again. And this cometh to paſs by the ignorance of the right manner of ordering the Marle, which is as ſtrong and cheerful as ever it was before, howſoever it worketh not this natural effect, through the unskilfulneſs of the Husbandman, that both waſteth the Marle, and loſeth withall his time, his labour, his coſt, and the profit of his ground. I cannot deny but a man ſhall ſee ſome grounds of nature fit to take Marle, and of ſituation ſo near to Marl-pits long time opened, that they might be marled plentifully with little charge, and have been heretofore marled indeed, and yet the ſame to lye now unploughed, and not only barren of themſelves, but alſo unapt for marle, and uncapable of amendment by tillage: But I muſt ſay withall, That albeit the men in thoſe former Ages had the right ordering of Marle, yet were they not all good Husbands alike, neither doth the field joy alike under the Farmer, and under the very Owner of the ſame, the one ſeeking the very uttermoſt gain that may be made during his ſhort intereſt, and the other endeavouring to perpetuate his commodity, even to the end of his eſtate, which hath no end at all: ſo that through unskilfulneſs of the one, and greedineſs in others, the ground may ſooner be crammed to death with Marle, then it ſhall be made the better or fatter by it. The reaſon whereof I will reſerve untill that I have cauſe to teach in particular after what manner

Marling was diſcontinued, and is now revived.

manner and meaſure the ground is to be marled. In the mean while I will open the nature and condition of this Wealdiſh ground, comparing it with the ſoyl of the ſhire at large, and afterward declare unto you what the Marl is, and what ſorts thereof there be uſually found in the Weald of *Kent*, and laſtly enter into the true and profitable uſe thereof, as well in each ſort of arable Land, as alſo for the increaſe of Corn and Paſture through the Kingdom.

The arable ground of this Weald hath commonly a fleet and ſhallow mould to be turned up by the Plough, ſo as in many places the dead earth or mould is within three inches of the face of the ground, and in the beſt places, the good mould exceedeth not ſix inches in depth at the moſt; and therefore it wanteth convenient ſubſtance to nouriſh Corn any long time, but will faint and give over after a crop or two; for the which reaſon alſo, it cannot yield any ſweet or deep graſs. Beſides this, the Weald hath many copped or hilly grounds, out of which there do many Quits or Springs of water iſſue that make it cold and barren; and from theſe hillocks, the beſt part of the good mould is waſhed down into the Water-courſes and Dykes that be made to divide and drain the Land. Furthermore, the Weald is divided into many ſmall incloſures, the biggeſt ſort (for the moſt part) of which, are between ſixteen Acres and twelve in quantity, and thereby hath it many Hedges and Trees, which in unſeaſonable weather do keep both the Sun and Wind from the Corn, ſo as for want of that ſuccour and comfort, it groweth, and many times rotteth in the earth, ſo that it carneth not nor eareth, nor proſpereth not kindly many times. And theſe ſmall Cloſes are cauſed by this, that men are not able to marl any great part or quantity of ground at once; and having marled a little, they are deſired to ſow it with Corn; for the preſervation whereof, as alſo for draining it, they are inforced to make ſo many and ſmall ſeverals: for all which reaſons it is plain, that there is little good arable Land there, and rarely any good Paſture, thoſe only places excepted, which are amended by irrigations of floods, which there is called flowing and over-flowing. Contrariwiſe, the arable land of the Shire at large, hath a deep and fat mould

of good earth, that is able to bear five or six good Crops together, without intermission; and after three or four years rest, will do the like again, and may so interchangeably keep that course for ever: yea, there be many grounds that are sowed without ceasing, because the mould is so deep, that when the upper part thereof beginneth to faint and be weary, men can add some strength of Cattel, and with the Plough go deeper, and fetch up a fresh mould that will continue for a long season. Furthermore, this arable ground is a hollow dry ground for the most part on a deep Clay, that by tillage and the weather, will become dry and spongy, so as the rain there washeth in the fat of the earth, the rather because it is not so hillish and sliding as the Weald, but more level, even and champion also, by which the Sun and Wind do dry the Corn, and do make it carn or ear well, and yield a purer flower than that which is sobbed in wet, and hath long time lyen before it be dryed again. But forasmuch as the great odds between these two sorts of grounds, may be made even by the help of *Marl*, if it be tightly ordered, as I said, I will shew you what it is, and how many sorts thereof be found in this Weald of our Countrey: *Marl* is indeed, as it is in name, the fat or (marrow) of the earth: for so did the *Germans*, and so did our elders the *Saxons* term it, of the word *Marize* which we found *Marrow*, and thereof we call it *marling*, when we bestow that fat earth upon our lean ground. *Pliny* saith, that the *Brittains* (meaning us) did use to amend their Land with a certain invention which they called *marga*, that is, the fat of the earth, and it is to be seen in *Conradus Heresbachis*, that the *Germans* do use it to the same end, and do call it by the same name till this very day: it is therefore a fat, oylie and unctuous ground lying in the belly of the earth, which is of a warm and moist temperature, and so most fertil; seeing that heat and moisture be the father and mother of generation and growth; howbeit this is not a pure and simple marrow (as that is which lyeth in our bones) but a juyce or fat liquor mingled with the earth; as is the fat which lyeth mixed and dispersed in our flesh, so as the one may be drawn away, and the other remain as it shall anon appear unto you.

Four sorts of Marle.

Four sorts of *Marle* be found in this Weald, known asun-

der

der by the difference of colours, and thereby also differing in degrees of goodness one from the other: for there is a gray, a blew, a yellow, and red Marle, all which be profitable, if they be earthly and fat, or slippery as soap: and most times little worth, if they be mixed with sand, gravel, or stone. So the blew is reputed the best, the yellow the next, the gray the next, and the red less durable then the other three; and yet it is thought the red to be the better, if it be found upon the blew, or others. These Marls do lie in veins or flowers, amongst those hillocks or cropped grounds most commonly, whereof I have spoken, and do oftentimes shew themselves at the foot of the hill, or about the mid-way, between the foot and the top thereof: some of them have over them a cover of ground, which we call Cope, not exceeding seven or eight foot in depth, some lye deeper, and other some do arise, as namely, where the ground lyeth not high, and the Marle commonly very good; and there is in diverse level grounds good Marle. 1. 2. 3. 4.

And as Marl is for the most part of these four colours, so is arable ground for the most part of these four sorts following, that is to say; either a cold, stiff and wet clay which is either the Cope of the Marle, or lyeth neer unto it, and is therefore commonly called, *the Marle Cope ground*, or a Hazell Mould, which I count to be one of the best wealdish Moulds, being a compound Mould, and very good for Marle, and will quit the cost very well. Then there are two sorts of sandy Mould, the one being a reasonable good kind, but not equal to the Hazel Mould, For you shall have in divers places of the Weald, this Hazel Mould to bear two or three good crops of Wheat, being Summer fallowed together, which you shall hardly have of any sandy ground without mending: but as I said of the better sort of these two kinds of sandy moulds, you have commonly very rich Wheat, being well Marled, which is not so barren as the other; but this last kind of sandy Mould is a very barren kind of ground, and hath a very fleet Mould, and you shall have very Heath grow upon it in divers places, and yet being ordered, as followeth, with Marle, will bear both good Corn and Pasture. And now that we may the better understand how Four sorts of Grounds. 1. 2. 3. 4.

to Marle and Manure every of these sorts by it self, you must know, that the hazel ground being dry, and not subject to Winter-springs, or tears of water, (for which, some call such, A whining or weeping ground) is to be handled thus.

The ordering of the Hazel-Mould.

First, Plough it as deep you can, with the strength of eight beasts at the least; and be not afraid to Plough up some part of the dead earth that lyeth under the upper good Mould: for the Sun, the Rain, the Wind, and the Frost, will in time mellow and amend it; and besides that, the Mould will be the deeper for a long time after, and thereby keep it self the longer from being stiffened with the Marle. Then you may bestow 500. Cart-loads (as we call them) of Marle upon each acre thereof, every load containing 10. or 12. bushels of eight gallons, and each acre containing 160. rods of 16. foot and a half to a rod. Then also you may chuse whether at the first breaking up you will will sow it with Oats, to kill the grass, or else first Marle it, and sow it with Wheat, or otherwise Summer-fallow it in the *May* after the Oats, and then Marle it, and sow it with Wheat. Upon that fallow or gratten, (as we call it) you shall do well to sow it with Pease, and at *Michaelmas* following, to sow that Pease-stubble or gratten with Wheat again, which also will be the better, if the Summer wherein it carried Pease, were moist; because the Pease being rich and thick, do destroy the Grass, that together with the washing of the fallows by rain, doth greatly consume the heart and vertue; or, as we call it, the state of the ground. But if the that Summer were dry, then is a fallow best, because the Sunne with his heat doth much good to the ground, and inableth it the better to bear out the weather in the Wheat season ensuing. If you like to sow it, as I said, with Pease, sow them as early and timely as you may, for they will be so much the sooner harvested, and then also you may Plough or stirre your gratten the sooner, whereby it will be the better hardned to bear out the weather in the time of sowing of your Wheat: but I doubt, Pease doth somewhat stiffen it. Two bushels of Wheat do suffice for the sowing of an acre hereof, except it be for the first crop, after the

the new breaking up of the ground; during which time, there is found a Worm, called an *Emble*, which in *French* signifieth Corn in the ground, being of colour yellow, and of an inch in length, and will eat some part of the Corn; but if you sow it thick, it will be both small eared, and thick and slender of straw, which the Rain and wind will beat and hurle down, and then it will scarcely rise again; or if it do, yet through the nearness of the shadow of the Trees and Hedges, that in so small closes be many, it will rather rot for want of drying, then come to maturity, that is, to perfect hard, and full grown Corn. After your first *Marling*, you must carefully fore-see, that you plough not the ground either with deep or broad Furrowes, but fleet and narrow, lest you cast your *Marle* into the dead mould; for *Marle* differeth much from Dung in this behalf; Dung spendeth it self upward, and howsoever deep it lye, the vertue thereof will ascend: But *Marle* (as saith Sir *Walter Henly*, in his Husbandry) sendeth his vertue downward, and must therefore be kept aloft, and may not be buried in any wise.

Furthermore, if your ground be Hilly or Coppied, it shall be fit that you make your Ridges 7. or 8. foot broad at the least; for in such falling Lands, the more broad Furrowes you make, as you must make many, where you make Ridges, the more of your *Marle* shall be washed, and carried into the bottoms. It is good also to draw a cross or quarter-Furrow, and opening the ends of your Land-Furrowes stopped, into it, to leave the other ends of your Furrowes, that the Water-shoot run not all the length of the field.

Again, This ground will alwayes be sown under furrow, and that also before *Michaelmas*, if the season will so permit: for this ground (if it be well husbanded) will be mellow and hollow, or loose, whereby through Rain and Frost, it would sink down from the root of the Wheat, if it should be sown above Furrow, the which being uncovered, must needs be bitten and killed with the cold.

It is also very fit that you harrow not this sort of ground too small, but that you leave the clods as big as a bowl, the which being mouldred with Snow and the Frost, will both cover and keep

keep warm what is underneath. Moreover, it shall be good, that upon some fair and dry day, in the beginning of *March*, you put your Flock of Sheep into your Wheat, that with their tramping upon it, the Corn may be well, and fast closed with the Earth, yet, and presently after (if it will bear foot) you may roul it as you do Barley, whereby both the Clods shall be broken, and the Gratten or Stubble shall be more even and ready for the Mower. Generally you must understand, that after you have bestowed your *Marle* in the field, you ought to let it lye unspread abroad, until you be ready to plough, and then immediately after the spreading of it, turn it into the ground with the Plough; for otherwise, if it should lye long spread in the field, the Sun will spend no small part of the fatness thereof, although I know many desire it, because it will be the smaller being burned with the Sun, which I like not. And therefore also no good Husband will carry and spend his dung in the time of Summer, except he do presently withall plough it into the ground; for although the mould of the arable Land it self will take good, if it be turned to the Sun, which will both dry and fasten it, yet the matter fareth far otherwise with the *Marle*, from which if the Sun shall draw and suck the fat moisture that maketh the Land fertile, more than becometh it (as *Columella* speaketh of the worst sort of ground) *Solum siccum, pariter & densum & macrum, quod sive exerceatur, sive cessat colono refugiendum est.* It becometh (saith he) a dry, thick, and lean Clod, which whether it be tilled or laid to rest, must be forsaken of the Husbandman as unprofitable. And now your Hazel mould being thus marled, plowed, sowr, and manured, you may not charge with Wheat above twice, and then it must rest five or six years together; all which time it will bear a very good and sweet Pasture, well set with a white Clover, or three leaved grass, most batning and profitable both for Sheep and Bullocks.

After those years ended, it will grow to some Mosse, or will peradventure cast up Broom; and then it is time to break it up, and sow and handle it as before, for two other Wheat-seasons or crops, leaving it a Wheat-gratten or stubble, rather than with an

Oat-

Oat-gratten or ſtubble, which burneth the Land being marled. Being thus interchangeably ſowed and reſted, your Hazel mould will continue good Arable and Paſture, by the ſpace of thirty years together; whereas if it ſhould be continually ſowed, ſix, or ſeven, or more years together without reſt, it will become utterly unfruitful both for Corn and Cattel alſo. Neither will it any thing avail to marle it over again, when it is ſo decayed, becauſe the former *Marle* having his juice exhauſted by continual Tillage, whereof the Corn ſucketh one part, and the Sun, Wind and Weather dry and waſteth the reſt, is but a dead Clod (as I ſaid) that is not capable of new *Marle* to amend it, nor caſteth any profitable graſs at all. For proof hereof, I my ſelf have ſeen, that the common Earth of High-wayes, by treading of Cattel, waſhing of Rain, and the drying of the Sun and Weather, lay ſeparated from the natural juice which it had in the pit, and ſpreading it upon the ground, I ſaw that the Land was not onely not amended; but much the worſe by it.

And now for an end of handling this ſort of Hazel ground; If it ſhall appear unto you that five hundred Loads of *Marle* upon the Acre, have clanged, ſtiffened, and too faſt bound your Land (as indeed the nature of *Marle* is to bind and to ſtiffen) then take you ſome of theſe wayes to help it: Either reſt it four or five years, or fodder upon it before you bring it up with ſo many Cattel as you may; or take the uppermoſt part of your Ditches, or Fore-lands, or waſt places of your fields which you may mingle with Dung, and which, before you ſowe your Wheat, you may lay upon your fallow, and ſtir it in with your plough; and by this you ſhall both looſen your *Marle*, and refreſh your ground: ſo that within forty years the mould of your ground will clean eat up and ſwallow the *Marle* that you lay upon it, and then become hungry, and is capable of *Marle* again as it was before at the firſt.

And by this alſo you may ſee the very cauſe for which it is good, not to ſow your marled Land continually, but to paſture it by turns, and ſo give it reſt; namely, becauſe the continual plowing doth exhauſt and ſpend the fat of the *Marle*, leaving the droſſie, dry, and fruitleſs parts thereof, to lye and cover the face

of

of your ground: whereas Pasturage, through the dunging, treading, and foddering of Cattel, doth encrease a new mould, which mingling it self with the dead mould, doth in the end give some life and heart unto it. And therefore these Farmers and Owners that have been at the cost to marle their ground, and will not forbear to till it, but hastening to raise their charge, do thereby utterly strike it with barrenness, are like to *Æsop*'s man, who having a Hen that layed him every day a golden Egg, and being greedy to have all the gold at once, did therefore kill the Hen, thinking to have found her belly full of gold, and so was both defrauded of that he looked for, and lost also what he had before.

Hitherto of the nature, ordering and marling of this hazel ground. Generally now for the continual fallowing and stirring thereof, you must understand, it may neither be fallowed wet, lest it answer more Grass than Corn; nor yet so dry, that the dead bottom swell up, as in great drowth it will, and swallow the good Mould that lyeth above: and therefore bind not your self to any precise time of any moneth, but the opportunity either in *May* or *June*, as you shall find the Weather to have prepared it for your desire. In the like temper you ought to stir it after a shower, after Saint *James* his day, or in the end of *July*, for so will it be dry and hard before the time of sowing: where if it be stirred later, every small Rain will distemper it into Dirt or Mire, by reason of the tenderness thereof, and then can you not fitly bestow your seed upon it.

The ordering of the Marle Cope ground.

The Marle Cope ground followeth, which is most commonly (as I said) a stiffe, wet, cold Clay, and not so fit as the former to be marled for Corn, except in some few fleet places thereof, but yet it may serve for Pasture or for Oates; such of them as be marled, must be fallowed fleet or shallow, lest the *Marle* become drowned in the wet: then being marled, they may in dry Summers, (and not over-moist Countries) bear Wheat in some mediocrity. Three hundred Loads at the most of *Marle* are sufficient for an Acre of this kind, and two bushels and a half of Wheat will sowe the same, which must be cast above furrow, fourteen or twenty dayes before *Michaelmas*. It requireth round, high and narrow Ridges, and that

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the water furrowes be stricken somewhat deep, the better to conveigh moysture from the Corn, and that it be left cloddy as much as may be: and yet to say the truth, such as will convert this sort of ground to Tillage, must provide a greater quantity of rich ground or Greet (as we term it) and Dung, than of Marle it self, to amend this Land withall. But if there be any ground that is light and whining, or weeping, because of Springs that are therein, and therewith doth cast up Rushes, let that be marled upon the green Land with four hundred or five hundred Loads upon the Acre, about the later end of Summer; for so will the Marle sink into it, and cast up a sweet grass for eight or ten years together, and untill that the Marle be sunk so low, that another sward or crust of Earth be grown over it, and then it is fit time to plow it, but yet very fleet and narrow, for so will it bear good Oats; but if it be so wet that you cannot adventure to sow your Wheat upon it, because the Rushes be not killed with this first plowing, then may you sow it again with Oats, drawing good water-furrowes to drain it, because it will be the wetter for plowing, and thereby the Marle also will the sooner lose his force; thus doing, let it lye to pasture again. Rushes.

There be some other Grounds of the Marle Cope, which carry a four Grass, and the Dyers-weed, (commonly called Greening weed) and having a great tore thereof, the which also may be amended by three or four hundred load of *Marle* upon the Acre of the green Land; for the *Marle* will both rot the tore or vesture thereof, and also enrich the Mould very much; so as it will answer good pasture twelve years after; and when you shall perceive that the *Marle* is well sunk, then may it be Ploughed fleet and narrow, sowed with Oats and fallowed; so may it both bear good Wheat if it find a good season, and be the richer a long time after, partly by the benefit of the *Marle*; partly by the rotting of the tore and sward, and partly by the dung and water of the Cattel that pasture upon it: for the sweeter the Pasture is, the more Beasts it feedeth; and the more Beasts it beareth, the more it self is amended by it. Dyers-weed.

Touching the fallowing of this Ground, great heed is required: for as it swelleth more than the Hazel-ground, if it be taken hard

and dry, so it is more grassie then that, or the Sandy Soyl if you fallow it well. The season therefore followeth commonly in *April*, or in the beginning of *May*, for to fallow it, and to stir it about *Midsummer*, or so soon after as the Rain shall have prepared it meet for your unshod Oxen to labour upon it. Many men fearing to hit the right season for this ground in the Spring of the year, do make it ready by a Winter fallow before *Christmas*, and by stirring it before *Midsummer*, if they may; which manner is not to be misliked.

The ordering of the Sandy moulds.

Lastly, cometh the two sorts of Sandy-ground, and gravelly mould, the one being to be ordered much after the hazel mould, saving he would have somewhat more *Marle*, and also would be favoured more in the often tillage, than it: for the hazel mould will bear or endure more than the Sand. But this last sort of sandy ground, being a very staring sand (as we use to call it) for much of it will bear Heath, being of it self very barren and very fleet or shallow mould, and over-hot and dry; and by reason of that extremity, is unfertile except it be marled very plentifully. And therefore when you break up this ground, Plough it as deep as you may, not fearing to cast down the best Mould thereof, because the *Marle* will pierce thorow, and sink down into it. An Acre of this ground requireth five or six hundred loads of your *Marle* at the least. So always under furrow about *Michaelmas* with two bushels and a half upon the Acre, which it will better carry than the Hazel ground; for although the straw be small, yet will it be harder, and stand better than that of the other. The Worm whereof I spake, will be busie with that that groweth on this sort of ground, untill that the heat thereof be somewhat asswaged by the *Marle*. If your ground be hilly, make your Water furrows in such sort as I have said before; for the saving both of your *Marle* and Mould, harrow it very little, leave it as cloddy as you may. After that you have taken a Crop from it, fallow that Wheat Gratten or Stubble in *May*; after that stir it also, and then about *Michaelmas* sow it with Wheat again; for it is not yet rich enough to bear you good Pease. This done, let it rest four or five years, and if it send up any plenty of Broom, cut

yor pull them when they be of some mean bigness; but plough not the ground untill it have taken such rest; and after it, you may well break it up of new, and sow it with Oats: which Oats gratten or Stubble, you must Summer-fallow, when it is at the Harvest; and then if you desire to have it in good heart, you must Marle it with three hundred or four hundred loads upon the Acre again. After this Crop thus taken, rest it five or six years, and then take one Crop more of Oats from it, and after a Summer-fallow, sow it with Wheat, and suffer it to lye a Wheat Gratten or Stubble, till it shall have rested as before is appointed for the hazel ground; and so it will be the better thirty or forty years after the marling. We have in this Weald a sandy and gravelly ground that is wet and weeping, the which is scarcely worth the marling, except the nearness of the *Marle*, (and thereby the small cost and charge thereof,) may intice a man to bestow the cost upon it with *Marle*, and then the best way is to Marle upon the green Land, or upon a fallow, with 500 Loads or more upon the Acre, or rather to take the profit thereof by Pasture then by Tillage: for it will hardly bear good Corn, which is soon killed with wet vapour that is continually sent up from the wet springs that lye under it. This sort of wet ground is to be fallowed, when it is both hard and dry, because it swelleth not as doth the hazel Mould, and may therefore be taken in *June*, if former fair Weather bring it not to a dry season; and it is to be stirred also after a showre, in the like plight as the hazel mould before. Your marleable Grounds being ordered in this wise, severally set down for each kind of them, will continually stand fruitfull either for Corn or Pasture, and albeit the high prices which Corn hath of late years carried may allure some men to sow Corn incessantly, and thereby to spend their *Marle*, and to choak their Arable in the end; yet I doubt not but the wiser sort can see that it is much better to maintain their Grounds hearty and in good plight for ever, then to raise a short gain, that will bring a long and perpetual loss upon them: The rather also, because that Butter, Cheese, and the flesh of Beef and Mutton be advanced in price equally, if not beyond Wheat, Rye, Barley and the other grains. Howbeit, a good Husband will make his profit of them

both: for if he have one hundred, or one hundred and twenty Acres of this Wealdish Arable, he will fit *Marle* and manure them, that dividing his Land into five or six equal parts, he may continually plough twenty, or five and twenty Acres for Corn, and yet lay to pasture the rest by turns, so that by the help of his *Marle* his Land shall be continually rich and profitable, both in the one and other of them.

And thus I have spoken of the Weald, describing the nature and property thereof: so may every man of discretion and judgment, which shall meet with earth of the same quality and condition (in what part of this Kingdome soever) make application of these Rules before rehearsed, and no doubt but the profit will make both the labour and cost profitable and pleasant.

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The several Wayes, according to the Opinion of Writers, and the certain Wayes, according to the Experience of Husband-men, for the destruction of Moals, or Moles which digg and root up the Earth, and how to reduce and bring the ground to the first goodness, having been spoyled by them.

IT is needless either to describe the nature and quality of this Vermine, or the injury and hurt which they do to the Husbandmen, Gardiner, and Planter, since no Country is exempt from their annoyance: but touching the Remedies, they are of greater secresie, and therefore I thought good in this place to insert them.

The ancient Writers are of divers Opinions touching the manner of destroying this Creature, and therefore have left unto us sundry medicines how to work the same; amongst the which one writeth as an approved Experiment, That if you take Wall-nut shels, and fill them with Brimstone, Chaff, and Petrosin, and then setting them on fire, put them into holes or trenches, through which the Moal passeth, the very smel or stink thereof will poyson them; so that if you digg, you shall find them dead in their holes.

Another affirmeth, That if you take Brimstone, and rank stinking Litter of Horses, and burn it in the holes or haunts of the *Moals*, it also will impoyson them, so as you shall find they will come out of their Caves, and lye dead upon the green grass.

A third affirms, That if you take green Leeks, Garlick or Onions, and chopping them grosly, thrust it into the holes, the very fume or savour thereof will so astonish and amaze the *Moals*, that they will presently forsake the Earth, and falling into a Trance, you may take them up with your hands. Now there is not any of these medicines which can be dis-allowed, for there is no doubt but that they will work the effects spoken of, if the *Moal* can be brought to take a full scent thereof; but it is a Vermine curious of scent, and passing quick of hearing, and being in a spacious ground, will prevent these baits: and therefore they are rather to be applied for Gardens or little Grounds, where there is but a Moal or two, then in large fields, where there be many hundreds.

To

To conclude, for this matter of medicines, or for the helping of Gardens, Hop-yards, or any ſmall ſpot of Ground, there is not any thing held more available, than to ſow in that place the herb called *Palma Chriſti*; for it is found by certain experience, that whereſoever that herb groweth naturally of it ſelf, or otherwiſe is either purpoſely ſown or planted there in no wiſe will any Mole abide.

Thus much I thought good to ſhew you for the uſe of medicine, and for clearing of ſmall grounds: Now for the annoyances which happen to great, large and ſpacious fields, through the multitude of Moles, there is only three abſolute wayes for the curing of the ſame.

The firſt is, in the moneths of *March* and *April*, to view where they caſt, and go about to make an extraordinary great Hill, in which they build their neſts, which is known by the newneſs of the Mould; then look for the new trench which leadeth to the ſame; for as ſhe goeth ſhe returneth; then with your Mole-ſpade open the trench in divers places, and then very ſtill and ſilently, obſerving to take the Wind, to prevent both hearing and ſmelling, watch the Mole as ſhe goeth or returneth, which is Morning, Noon, and Evening; and as ſoon as you ſee her caſt, ſtrike her with your Mole-Spear made of many ſharp pikes, and ſo caſt her up, and kill her. Thus have I ſeen by one man an hundred deſtroyed in one day.

The next infallible way for the deſtruction of Moles is, If you can by any poſſible means bring in water to over-flow and waſh your ground, and as ſoon as the earth is wet over, the Moles will come forth of themſelves, and you may gather them up with your hands at pleaſure.

The laſt (indeed as much approved as any) is to take a live Mole in the moneth of *March*, which is their bucking or ingendring time, and put it into a deep braſs Baſon, or other deep ſmooth Veſſel, out of which the Mole cannot creep; and then at Evening bury it in the earth up to the brim, and ſo leave it, and the impriſoned Mole will preſently begin to ſhrike, complain, or call, ſo that all the Moles in the ground will come to it, and tumbling into the Veſſel, they are priſoners alſo; and the more priſoners, the greater will be the noiſe; and the more noiſe, the

more

more *Moles* will come to the reſcue: ſo that I have ſeen 50 or 60 taken in one night, and in one veſſel or braſs Kettle.

Now having thus learned how to deſtroy the *Moles*, it is meet you alſo know how to prevent the coming in of foreign *Moles*; becauſe though you keep your ground never ſo clean, yet if your next Neighbour be an ill husband, his field may ſoon impoyſon yours again: therefore to prevent the coming in of any foreign *Mole*, make but little Furrowes or Trenches about your ground, and ſcatter in them ſmall round Balls made of Hemp-ſeed, or Hemp-ſeed and *Palma Chriſti* beaten together, and you ſhall not need to fear the coming in of any Neighbouring *Moles*, how many ſoever there be about you.

Laſtly, for the reducing or bringing the ground to the firſt perfection again (for howſoever ſome Husbandmen ſay, Moe *Mole-hills*, moe ground; yet 'tis certain, that moe *Mole-hills*, leſs good ground) for never was yet ſweet graſs ſeen on a *Mole-hill*; therefore to bring it to perfection, which I mean to be meadow-ground, or ground to be mown, which *Mole-hills* cannot be, you ſhall firſt with a ſharp paring-ſhovel, pare off the ſwarth about three fingers deep, for fear of hurting the roots of the graſs: and then the ſwarth taken off, digg away the reſt of the Mould, and ſcatter it as ſmall as you can round about the Hill, then take the green ſwarth, and cutting it artificially, lay it cloſe and faſt, and level, where you took away the mould, as if there had never been Hill there: and thus do to all your Hills, though they be never ſo innumerable; and after all your ground is levelled, as ſoon as the firſt ſhowr falleth, run all your ground over with a pair of back Harrows, or an Harrow made of a Thorn buſh, and it will break the mould as ſmall as aſhes, which will ſo comfort and refreſh the root of the graſs, that it will grow in infinite abundance; and ſowrneſs which was cauſed by reaſon of the Hills, will come again to a perfect ſweetneſs, and the meadow will be more fruitful than before by many degrees. And thus much for the deſtruction of *Moles*, and the reducing of the Earth to his firſt goodneſs.

FINIS.

FINIS.

Markham's Farewel to

HUSBANDRY:

OR,

The Enriching of all ſorts of Barren and Sterile Grounds in our Nation, to be as Fruitful in all manner of Grain, Pulſe, and Graſs, as the beſt Grounds whatſoever.

Together with the Annoyances, and preſervation of all Grain and Seed, from one year to many years.

As alſo a Husbandly computation of Men and Cattels daily Labours, their Expences, Charges, and utmoſt profits.

Now newly the Ninth time revis'd, corrected and amended, together with many new Additions, and cheap Experiments:

For the bettering of Arable Paſture, and Woody Grounds: Of making good all Grounds again, ſpoiled with over-flowing of Salt water by Sea breaches; as alſo the enriching of the Hop-garden. And many other things never publiſhed before.

By *G. M.*

LONDON,
Printed by *E. O.* for *George Sawbridge*. 1668.

TO THE

RIGHT WORSHIPFUL

And his moſt worthy Friend Mr. *Bonham Norton* Eſq;

Worthy Sir,

KNowledge, which is the divine mother of certain Goodneſs, never came unwelcome to a knowing Judgement; no more, I hope, ſhall this my labour to your worthy Self, ſince doubtleſs you ſhall find in it many things New, ſome things neceſſary, and nothing which hath not in it ſome particular touch of profit: It is a work your former incouragements to my other labours did create in me, and the wants you worthily found, I hope ſhall bring you ſupplies both wholeſome and becomming. The experience, I

 aſſure

assure your goodness, was the expence of a bitter and tedious Winter; but the contentment (in gaining my wish) made it more pleasant then all the three other Seasons. What ever it be, it comes to you full of love, full of service. And since I know vertue measureth all things by its own goodness; it is enough to me, that I know you are that Vertue. In you is power to judge, in you is Authority to exercise Mercy; let them both flye from your goodness with that mildness, that in them my hopes may be crowned, and my self rest ever at your service.

GERVASE MARKHAM.

The

The Preface to the *Reader.*

Shewing the use, profit, and truth of the Work.

THe use and application of this Work, (gentle Reader) is to reduce the Hard, Barren, and Sterile grounds, such as were never fruitfull, or such as have been fruitfull, and are made barren by ill Husbandry, to be generally as fruitfull as any ground whatsoever; from whence shall ensue these general profits.

First, Plenty of Corn and Pulse; because all grounds being made able and apt for Tillage, the Kingdome may afford to sow for one bushell that is now, hereafter five hundred; so mighty great are the unfruitfull wasts of Heaths, Downes, Mores, and such like, which at this day lye unprofitable; and to this abundance of Corn will arise an equall abundance of Grass and Pasture: for as the best ground of the worst is to be converted to Pasture, and the worst to Tillage; so that worst being tilled and drest, when it hath done bearing of Corn, (which will be in six or seven years) shall for as many years more bear as good Pasture either for breeding or feeding as can be required, and then being newly drest again, shall newly flourish in its first profit.

Secondly, whereas in fruitfull places, the third or fourth part of all arable ground is lost in the fallow or tilth ground, now in these barren grounds, you shall keep no fallow field at all, but all shall bear either Corn or Grass; that fallow part serving

ſerving to pay for the charge beſtowed on it, and the reſt.

Laſtly, whereas in fertile grounds you cannot have either Wheat, Barley, or Rye, under two, three, four, five, and ſometimes ſix ſeverall plowings, as fallowing in January *and* February, *Stirring in* April *and* May, *Soiling in* July *and* Auguſt, *Winter-ridging in* October *and* November, *and Sowing, with other Ardors; now in theſe hard grounds reſtored, you ſhall not plow above twice at the moſt, to the ſaving of the Husbandmans pains, his Cattels travell, and a larger limitation of time for other neceſſary buſineſſes.*

For the truth of the Work, he that will ride into the barren parts of Devonſhire *or* Cornwall, *into the Mountainous parts of* Wales, *into the hard parts of* Middleſex, *or* Darbyſhire, *or into the cold parts of* Northumberland, Cumberland, Weſtmerland, Lancaſhire, *or* Cheſhire; *ſhall find, where induſtry is uſed, a full ſatisfaction for all that is here written.*

Farewell.

Thine, G. M.

MARKHAM
HIS
Farewel to Husbandry.

CHAP. I.
The Nature of Grounds in general; But particularly of the barren and steril earth.

TO come to the full effect of my purpose, without any preambulation, or satisfaction to the curious, (for to the honestly vertuous are all mine endeavours directed) you shall understand that it is meet, that every Husbandman be skilful in the true knowledge of the nature of grounds; as, which is fruitful, which not: of which in my first Books I have written sufficiently; nor do I in this book itnend to write any tittle that is in them contained; for as I love not *Tautology*, so I deadly hate to wrong my friend.

Grounds, then, as I have formerly written in my first books, being simple or compounded; as simple Clays, Sands, or Gravels together, may be all good, and all fit to bring forth increase; or all evil and barren; and unfit for profit: for every Earth, whether it be simple or compound, whether of it self or of double mixture, doth participate wholly with the Clime wherein it lyeth; and as that is more hot, or more cold, more moist or more dry, so is the earth ever more or less fruitful. Yet for the better understanding of the plain Coun-

Country-man, you ſhall know that both the fruitful and unfruitful Grounds have their ſeveral faces and characters, whereby they be as well known, as by the clime or ſituation of the continent; for that ground, which, though it bear not any extraordinary abundance of graſs, yet will load it ſelf with ſtrong and luſty weeds, as Hemlocks, Docks, Mallows, Nettles, Ketlock, and ſuch like, is undoubtedly a moſt rich and fruitful ground for any grain whatſoever. Alſo, that ground which beareth Reeds, Ruſhes, Clover, Daiſie, and ſuch like, is ever fruitful in Graſs and Herbage, ſo that ſmall coſt, and leſs labour in ſuch grounds, will ever make good the profit of the Husbandman: But with theſe rich grounds, at this time I have nothing to do.

To come down then to the barren and unwholeſome Grounds, you ſhall underſtand that they are to be known three ſeveral wayes: firſt, by the Clime and Continent wherein they lye; next, by their conſtitution and condition; and laſtly, by outward faces and characters. By the Clime and Continent, as when the ground lyes far remote from the Sun, or when it lyes mountainous and high, ſtony and rocky, or ſo neer unto the skirts and borders of the Sea, that the continual Foggs, Storms, Miſts, and ill Vapours ariſing from thence do poyſon and ſtarve the earth: all which are moſt apparent ſigns of barrenneſs. By the Conſtitution and Condition, as when the ground is either too extreamly cold and moiſt, or elſe too violently hot and dry; either of which produceth much hardneſs to bring forth, and ſheweth the earth, ſo lying to be good for little or no profit. By the outward faces and Characters, as when you ſee (inſtead of Graſs, which would be green, flowry, and thick growing) a pale thin moſſie ſubſtance cover the earth, as moſt commonly is upon all high Plains, Heaths, Downs, and ſuch like; or when you ſee the ground covered with Heath, Ling, Broom, Braken, Gorſe, or ſuch like, they be moſt apparent ſigns of infinite great barrenneſs, as may be ſeen in many Mores, Forreſts, and other wild and woody places. And of theſe unfertile places, you ſhall underſtand, that it is the clay ground, which for the moſt part brings forth the Moſs, the Broom, the Gorſe, and ſuch like; the Sand, which bringeth forth Brakes, Ling, Heath,

and

and the mixt earth, which utters Whinnes, bryars, and a world of such like unnatural and bastardly Issues.

Thus having a true knowledge of the Nature and Condition of your ground, you shall then proceed to the ordering, earing, and dressing of the same, whereby it may not only be purged and clensed from those faults which hindred the increase thereof, but also so much bettered and refined, that the best ground may not boast of more ample increase, nor your more fruitfull placed Neighbours exceed you in any thing, more then in a little ease.

CHAP. II.

Of the Ordering, Tilling, and Dressing of all sorts of plain barren Clayes, whether they be simple or compound.

THou whom it hath pleased God to place upon a barren and hard soil, whose bread must evermore be ground with sweat and labour, that maist nobly and victoriously boast the conquest of the earth, having conquered Nature by altering Nature, and yet made nature better than she was before: thou I say that taketh this honest delight in goodness, hearken unto these following Precepts.

The first enriching of barren Grounds.

As soon as thou hast well pondered and considered the nature of thy ground, and dost find that it is altogether barren & unfruitful, the clyme and condition not suffering it to bring forth any thing of worth or profit, and that thou hast well weighed what manner of earth it is, as that namely, it is either a simple Clay, or a Clay so mixt with other earths, that yet notwithstanding the Clay is stil most predominant; thou shalt then select or chuse out of this earth so much as to thy self shall seem convenient, it being answerable to the strength of thy Team, and the ability of thy purse and labour to compass; and this earth so chosen out, thou shall about the beginning of *May*, in a fair season break up with a strong Plough, such as is generally used in all strong Clay grounds, the Share being rather long then broad, and the Coulter rather somewhat bending then streight and eaven according as the nature of the ground shall require,

which every ſimple Plough-man will ſoon find out in turning up two or three furrows; for according to the cutting of the earth, ſo muſt the Husbandman faſhion the temper of his Plough.

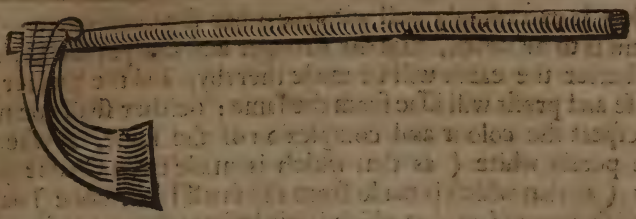
The manner of Ploughing.

Now for the manner of plowing this bad and barren earth, if the ground lye free from water (which commonly all evil barren earths do) you ſhall then throw down your Furrows flat, and betwixt every Furrow you ſhall leave a baulke of earth half as broad as the Furrow, and ſo go over, and plow your whole earth up, without making any difference or diſtinction of lands: but if you fear any annoyance of Water, then you ſhall lay your Furrows more high, near, and cloſe together, dividing the grounds into ſeveral lands, and proportioning every land to lye the higheſt in the midſt, ſo that the water may have a deſcent or paſſage on either ſide.

Hacking of Ground.

Now ſo ſoon as you have thus plowed up your land, and turned all the ſwarth inward unto the earth, you ſhall then take Hacks of Iron, well ſteeled, and reaſonable ſharp, ſuch a competent number, as your purſe or power can compaſs, or the greatneſs of your ground requireth: for you ſhall underſtand, that one good hacker, being a luſty labourer, will at good eaſe hack or cut more then half an acre of ground in a day; and with theſe hacks you ſhall hew and cut to pieces all the earth formerly plowed up furrow by furrow; and not the furrows onley, but alſo each ſeveral baulke that was left between, and any other green ſwarth whatſoever the plough had eſcaped, and it ſhall be cut into as ſmall pieces as conveniently as you can; for thereby is your mould made much more mellow and plentifull, and your Seed at ſuch time as it is to be caſt into the earth, a great deal the better and ſafer covered, and much more ſooner made to ſprout and bring forth increaſe. Now for the ſhape and faſhion of theſe Hacks, you ſhall behold it in this figure.

When



When you have thus hacked all your ground, and broke in pieces all hard crusts and roughness of the swarth, you shall then immediately, with all the convenient speed you can (because time is very precious in these labours) if you be near unto any part of the Sea-coast, or to any other creek or River, where the salt-water hath a continual recourse, thence fetch (either on Horse-back, or in Cart, or other Tumbril, such as the nature of the Country, or your own ease can afford) great store of the salt sand, and with it cover your ground which hath been formerly plowed and hackt, allowing unto every acre of ground, threescore or fourscore full bushels of sand, which is a very good and competent proportion; and this sand thus laid, shall be very well spread and mixed among the other hackt and broken earth. And herein is to be noted, that not any other sand but the salt is good or available for this purpose, because it is the brine and saltness of the same which breedeth this fertillity and fruitfulness in the earth, choaking the growth of all weeds, and bad things which would sprout from the earth, and giving strength, vigour, and comfort to all kind of grain, or pulse, or any fruit of better nature. Sanding of Ground.

When you have thus sanded your earth, you shall then if you have any Limestones about your grounds (as barren earths are seldome without) or if you have any quarries of stone (which are seldome unaccompanied with Lime-stone) gather such Limestone together, and make a Kiln in the most convenient place you have, as well for the carriage of the Lime, as for the gathering together of the stone, and having burnt your Lime, the manner whereof is so generally well known through the whole Kingdome, that in this place it needeth little or no repetition, you shall then on every Acre so formerly plowed, hackt, and sanded, bestow at least forty or else fifty bushels of lime, spreading and mixing Liming of Ground.

mixing it exceedingly well with the other ſand and earth; and herein is to be noted, that the ſtronger and ſharper the Lime is, the better the earth will be made thereby, and the greater encreaſe and profit will iſſue from the ſame: neither ſhall you need to reſpect the colour and complexion of the Lime, as whether it be purely white (as that which is made from Chalke) or gray (as that which is made from the ſmall Lime-ſtone) or elſe blackiſh brown (as that which is made from the great ſtone and main Quarry) ſince it is the ſtrength and goodneſs of the Lime, not the beauty and colour, which brings forth the profits.

Manuring of Ground.

Now that this Lime is of excellent uſe, and wonderful profit, do but behold almoſt all the Countries of the Kingdome where there is any barrenneſs, and you ſhall find and ſee how frequently Lime is uſed, in ſomuch, that of mine own knowledge in ſome Countries, where (in times paſt) there was one Buſhel made or uſed, there is now many loads, and all riſen from the profitable experience which men have found in the ſame.

Now, when you have thus Limed your ground, you ſhall then take of the beſt manure you have, as Ox, Cow, or Horſe-dung, Straw rotted either by the littering of beaſts, or by caſting upon high-wayes, the mud of Lakes, Ponds or Ditches; the ſoyle of young Cattel made in the Winter time by feeding at ſtand, Heaks, or any ſuch like kind of Ordure; and this manure or compoſt you ſhall carry forth either on Horſe-back, or in Carts or Tumbrels (according as the Country will afford) and you ſhall lay it and ſpread it upon your ground ſo formerly plowed, Hackt, Sanded, and Limed in very plentiful manner, ſo far forth as your proviſion will extend; for it is to be underſtood, that barren and hard earths can never be overladed with good manure or compoſt, ſince it is onely the want of warmth and fatneſs, which manure breedeth and cauſeth all manner of fruitfulneſs.

Times for all labours.

After you have thus manured all your ground, it is to be ſuppoſed that the ſeaſon of the year will be ſhot on, for the labour of ſanding will take little leſs than two months, your ground being of an indifferent great quantity, except you have aſſiſtance and help of many of your friends, which is a courteſie,

that

that every Husbandman may embrace, but not truſt unto; for I would not wiſh any man that hath not Tenants to command, to preſume on other friends, leſt they fail him, and ſo his work lye half done, and half undone, which is a great Character of negligence and improvidence: but let every one proportion their labours according to their own ſtrengths, and the number of their ordinary families. The Liming of your ground will take at leaſt half ſo much time as the ſanding, and the Manuring rather more than leſs than the Liming; ſo that by any reaſonable computation of time, beginning to plow your ground at the beginning of *May*, ere it be Hackt, Sanded, Limed, and Manured, *Michaelmas* will be come, which is the end of *September*; for I allow the month of *May* to plowing and hacking; *June* and *July* for Sanding; *Auguſt* for Liming; and *September* for Manuring. So then to proceed on with our labour, at *Michaelmas*, or from that time to the end of *October*, you ſhall begin to plow over that ground again which formerly you had Plowed, Hackt, Sanded, Limed and Manured; and at this latter plowing you ſhall plow the ground ſomewhat deeper then you did before; and taking a good ſtitch (as they call it in Husbandry) you ſhall be ſure to raiſe up the quick earth, which had not been ſtirred up with the Plough before, making your furrows greater and deeper than formerly they were, and laying them cloſer and rounder together then they were before; and in this order or latter earing, you ſhall be careful to Plough your ground as clean as you can without balks, or other eſcapes in husbandry, and as you thus plow your ground, you ſhall have certain Hackers, with their Hacks to follow the Plough, and to cut the earth and furrows into very ſmall peeces, as was formerly ſhewed in the hacking and cutting of the firſt arder; then ſo ſoon as your ground is thus ploughed and hackt, you ſhall take a paire or two of very ſtrong and good Iron harrows, and with them you ſhall go over your ground, tearing that which was formerly ploughed and hackt into more ſmall peeces than before, and raiſing up the mould in much greater abundance than was formerly ſeen: which work once finiſhed, you ſhall then take your Seed which would be the fineſt, cleaneſt, and beſt Wheat you can provide, and after the manner of good Husbandry,

Second Plowing.

Second hacking.

Firſt Harrowing.

Of sowing the seed.

bandry, you shall sow it on the ground very plentifully, not starving the ground for want of Seed (which were a tyrannous penury) nor yet choaking it with too much (which is as lavish a foolery) but giving it the full due, leave it to the Earth and Gods blessing.

The second Harrowing.

Now so soon as you have thus sown your seed, forthwith you shall take all the harrows again, harrowing the seed into the earth, and covering it close and well with all care and diligence: and in this latter harrowing, you shall have great respect to break every clot as much as you can, and so stirr up and make as much mould as you can, and the finer such mould is made, the better it is, so it cover deep and close; for you shall understand, that all these kinds of barren Clayes are naturally tough, cold, and binding, whereby they stifle and choak any thing that growes within them; for the natural toughness of the earth will not give any thing leave to sprout, or if it do sprout, the binding nature thereof so fetters and locks it within the mould, that it cannot issue out; or if it do (with extreme strugling) rise through the pores of the same, yet doth the cold presently starve the root, and make the stemme utterly unable to bring forth fruit, or any profit at all, so that if the toughness be not converted to a gentle looseness, and easie dividing of it self, the coldness unto warmth, and the hard binding unto a soft liberty, there can be small hope of commodity, which this manner of dressing the earth bringeth to pass; for the mixture of the sand takes away the toughness, the Lime brings heat, and the manure comfort and liberty: As for the hacking and cutting the earth, that is, to make all the rest symbolize and mix together; for as if any by a Dispensatory make a Medicine, and cast his ingredients confusedly one upon another, without care of mixture, melting, or dissolution, shall find but a corrupt, disorderly, and ill compounded receit; so he that dresseth and manureth his ground, and doth not by hacking, plowing, or some other husbandry course mix the earth, and the compost perfectly well together, shall seldom find profit from his seed, or find any man of wit desirous to become his imitator. Now I must confess, that some easie grounds of light and temperate nature, will mix very well and sufficiently by the help of the Plough

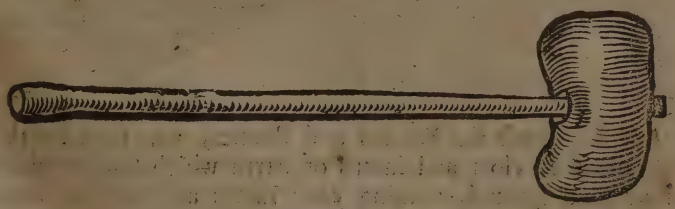
Faults in the Earth.

only;

only; but this barren hard earth of which I now write, must onely be broken by this violent and extreme labour, or else there will neither be mould, earth, or any converture for the Seed, but only foul, great, and disorderly clots and lumps, through which the grain can never pass, and that which lyeth uncovered will be made a prey to fowl, and othervermine, which will hourly destroy it.

Of clotting the Earth.

After you have sown and harrowed the ground, you shall then see if there remain any clots or hard lumps of earth unbroken, which the teeth of the harrow are not able to tear in pieces (as it is very likely you shall perceive many) for these hard barren earths which are plowed up in their green swarths, are nothing neer so easily broken and brought to mould, as are the mellow soft earths which have been formerly plowed many times before, because the hard and intricate roots of the Grass, Moss, and other quick substances growing upon the same doth bind and hold the mould so close and fast together, besides the natural strength and hardness of the earth, that without much industry and painfull labour, it is impossible to bring it to that fineness of mould which Art and good Husbandry requireth; therefore as soon as you behold those clots and lumps to lye undissevered, and unbroken, you shall forthwith take good strong clotting beetles, or mauls made of hard, and very sound wood, according to the proportion of this figure.

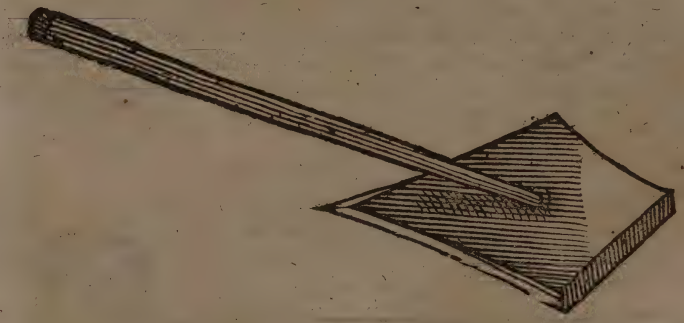


And with these mauls or clotting beetles, you shall break all the hard clots and lumps of earth in pieces, even to so small dust as possibly you can, because you are to presuppose that these clots thus hard, tough, and unwilling to be with any means digested into

into mould, are either not at all, or else very insufficiently mixed with the Sand, Lime, and other manures: and therefore you must rather break them that thereby they may mixe, and give easie passage to the Grain, and not like heavy poyses and dead lumps lye and press down the Seed so that it cannot sprout.

Another manner of Clotting.

But if it so fall out, partly by the hardness of the ill earth, partly through the season and dryness of the yeer, that these clot and lumps of earth will either not be broken at all, or at least so insufficiently that the mould will not be any thing neer so fine as you would have it; you shall then, having done your best endeavour, let your ground rest till there have fain a good round shower or two of rain: which may wet the clots through and through; and then the next fair blast you shall take your clotting beetles, but not those which you took before in the dry season, but some much lighter, broader and flatter, being made of thick Ash-boards more than a foot square, and above two inches in thickness, according to this figure.



And with these flat Maules and Beetles, you shall break all the unbroken clots and lumps of earth which shall trouble or annoy your ground, making your Lands as plain and smooth as is possible, so that the grain may have easie passage forth; which labour as soon as you have finished, you shall then refer the increase and prosperity thereof unto the mercies of God, who no doubt will give his blessings according to thy labour and thankfulness.

As

As touching the trimming and weeding of this Corn, after it is ſprung a foot above the earth, or thereabout, you ſhall underſtand, that theſe hard barren grounds are very ſeldom troubled with weeds; for weeds, eſpecial great, ſtrong, and offenſive weeds, are the iſſues of rich and fertile ſoiles; yet, if through the trimming and making of this earth (which is not commonly ſeen) you do perceive any ſtore of thiſtles or other groſſer weeds to ſpring up, you ſhall then in the month of *May*, with hooks, nippers, and ſuch like tools, cut them away, or pull them up by the rootes, which indeed is the better manner of weeding. Of weeding.

Now here is to be underſtood, that your ground being thus dreſſed and trimmed as is before ſhewed, you may very well for the two firſt years ſow Wheat or Rye upon it, but Wheat is the greater profit and more certain ſeed; the third year beſtowing but your fold of Sheep upon it, that is, manuring it with your ſheep, (for it is to be intended, that in theſe barren earths ſheep are the greateſt ſtock of which the Husbandman can boaſt) you may very well ſow it with Barley, and have a fruitfull & plentifull crop thereon; the next three years, you may ſow it with Oats; and the ſeventh year you may ſow it with ſmall white Garden Peaſe or Beans, according as you ſhall find the ſtrength and goodneſs of the ground, (for Beans deſire ſomewhat a richer ſoyle than the Peaſe;) then for three or four years following the ſeven, you may let it lye at reſt for graſs, and doubtleſs it will yield you either as good paſture, or as good Medow as you can reaſonably require. And then after the expence of this time, it ſhall be good that you dreſs and order your ground again in ſuch ſort as was formerly declared; and thus you may every year dreſs one or other piece of ground, till you have gone over all your ground; or at leaſt as much as you ſhall think expedient; and without faile, he that is Maſter of the moſt fruitfulleſt and richeſt ſoyl, ſhall not boaſt of any greater increaſe then you ſhall, only your charge may be a little more, and ſo ſhall be alſo your commodity, which ſhall make an amends for your charge: as for your toyles, yours ſhall be much the leſs, by a juſt computation; for though you have many labours, yet they are but Summer labours, and neither hurt your own body, nor your Several S ſeveral ye

Cattel; whereas the Matter of the rich soyl is in continuall work both Winter and Summer, labouring twice so much to confound the superfluous growth of weeds, as you do to beget the increase of Corn, and whereas he must ever keep a third or fourth part of his Corn ground without fruit, you shall not keep any which shall not yield you a sufficient commodity.

Objection. Now me-thinks I hear in this place to be objected unto me, that whereas I do prescribe the sanding of these barren earths with the salt Sea-sand and no other, (as it is true, for all other fresh sand is unvailable) what if the ground do lye so far within the Land, that there is no salt sand within many score miles of it, how then shall I make good my barren earth? sure to fetch sand so far will never equal the cost; or it may be this experience hath no further limits then to such hard and barren earths as lye alongst the Sea coast only.

Answer. To this I answer, that albeit this salt Sea-sand be of infinite good and necessary use, inriching grounds wonderfully much, yet is not this experience of bettering of barren soiles so strictly bound thereunto, but that without any use of the same, you may make your earth as fruitful in Corn or Grass, as hath been already formerly declared.

Ordering Earth where sands wanteth. Therefore if your ground lye much within the Land, and far from the Sea, so that this commodity of sand is not by any possible means to be gotten; then you shall (having first lookt into the nature of your ground, and finding it to be by all characters and faces a cold, barren, stiff, dry Clay, yielding nothing by a short mossie grass, without any other burthen at all, as is seen upon most Plains, and Downs of this Kingdome) first plow it, and hack it, as was before shewed in the former part of this Chapter, then instead of sanding it, you shall lime it as aforesaid, or rather a little more plentifully, then you shall manure it, after (as at seed time) you shall plow it and hack it again, then harrow it as before said; then to every acre of ground you shall take two bushels of very dry bay-salt, and in such manner as you sow your wheat, you shall sow this salt upon the ground; then immediately after the sowing of the salt, you shall sow your Wheat, which wheat would be thus prepared before you sow it; the day before you are to sow your grain, you

Sowing of Salt.

shall

ſhall take bay ſalt and water, and mixing them together make a brine ſo ſtrong that it will bear an egge, then put the Wheat you are to ſow into that brine, and ſet it ſteep therein till the next day, then drain it as clean as may be from the brine, and ſo ſow, harrow it, clod it, and weed it, as was before declared, and no doubt but you ſhall find a marveilous great increaſe thereby; for this I can aſſure you, both from a moſt certain knowledge, and a moſt worthy Relation, that a Gentleman buying ſome ſtore of ſeed-wheat, and inforſt to bring it home by Sea, by ſome caſual means, ſome of the ſacks at the unlading, fell into the Sea, and were much drencht in the ſalt-water; whereat the Gentleman being grieved (as doubting ſome hurt to come to the ſeed) yet inforſt of neceſſity to make uſe thereof, cauſed all the Wheat which was ſo wet to be ſown by its ſelf in a particular place, and upon the worſt ground which he had, (as much deſpairing in the increaſe thereof) and it is moſt infallible true, that of that wet ſeed, he received at leaſt five fold mor profit then of any other; and from thence it came, that this experiment of Brine and the ſowing of ſalt hath taken place; from which the painful Husbandman hath found ſuch infinite increaſe to ariſe, that the uſe thereof will never be laid down in this Kingdome. Neither is the thing it ſelf without good and ſtrong probability of much increaſe and ſtrength for the bettering of all manner of arable grounds; for there is nothing which killeth weeds, quicks, and other offences of the ground ſo much as ſaltneſs: for what makes your Pidgeons dung & your Pullens dung to be better for arable grounds, then any other dung, or manure whatſoever, but by reaſon of the ſaltneſs thereof? by which ſaltneſs alſo, you may judge the ſtrengsh and heat thereof, inſomuch that the proper taſte of fire, or any hot thing is ever ſalt; alſo we ſay in Philoſophy, that blood which carryeth the vital heat and warmth of the body is in taſte ſalt, and ſo a nouriſher, maintainer, and increaſer of all the ſtrength and vigour of the inward faculties; whereas Flegm, Choler, and Melancholly, which are the hurts, and confounders of the vital ſpirits, the firſt is in taſte ſweet, the ſecond bitter, and the laſt of an earthly and dry taſte, full of much loathſomeneſs.

The Excellency of Salt.

Now again, you ſhall underſtand, that as you thus wet or ſteep

Of ſteeping ſeed in brine.

ſteep your Wheat ſeed, ſo you may alſo ſteep any other Seed; as barley, oats, beans, peaſe, lupins, Fetches, and ſuch like; of which your beans, peaſe, and lupins, you may ſteep more than any of the reſt, and your Oats the leaſt.

As touching Rye, it ſhall be good not to ſteep it at all, for it is a great enemy to all manner of wet and moyſture, inſomuch, that the curious Husbandman will forbear to ſow it in any ſhowre of rain, bearing in his mind this ancient adage, or ſaying, that *Rye will drownd in the Hopper*; as on the contrary part, *Wheat would be ſown ſo moiſt that it might ſtick to the Hopper*: Yet notwithſtanding, when you do ſow Rye in any of theſe In-lands, and cold barren Countries, where ſand is not to be gotten, you ſhall not by any means omit the ſowing of your ſalt before; for it is nothing neer ſo moiſt as it is warm and comfortable.

CHAP. 3.

Of the ordering, Tilling, and dreſſing of all rough Barren Clayes, whether ſimple or compound, being laden and over-run with Gorſe, Broom, and ſuch like.

NExt unto theſe plain barren earths, which by reaſon of their heights, are ſubject in the Winter time to all manner of cold, froſts, ſtormes, tempeſts, blaſts, and windes, which are the perfect hinderers of all encreaſe and growth; and in the Summer time to all hot ſcorchings, ſcaldings, and fiery reflections of the Sunne, which on the contrary part, burneth and withereth away that little ſeeming increaſe which appeareth above the earth; I will place that barren clay, whether it be mixt or unmixt, which lying not ſo high, and being ſubject unto thoſe hurts and offences, ſeemeth to be a little more fruitfull, yet either by the extream cold moiſture thereof, or the ſtony hardneſs and other malignant qualities, is no leſs barren than that of which I have formerly written, which indeed is that barren and vile ſoyle, which will neither bear corn nor graſs, but is onely over-run and quite covered

over

over with great, thick, and tall bushes of Gorse or Furres, which is a most sharp, woody, and gross weed, so full of pricks, that neither Horse, Beast, Sheep, nor Goats, dare thrust their noses to the ground to gather up that little poor grass, which groweth thereon. And albeit these Gorse or Furs are one way a little commodity to the needfull Husbandman, in being a reasonable good fuel, either for baking, brewing, or divers other sudden and necessary uses; yet in as much as the profit being compared with the great quantity of earth which they cover and destroy, and which with good Husbandry might be brought to great fruitfulness, it is indeed no profit at all; it shall not be amiss for every good Husbandman that is pester'd and over-laden with such ground, to seek by way of good Husbandry how to reduce and bring it to that perfection and excellency which may be best for his own particular commodity, and general good of the Kingdome wherein he liveth.

Then there is another kind of soile which is nothing at all differing from this, but is every way as barren and sterile, (which is as noysome a weed as the former) and though it have not such sharp prickles as the other, whereby to hinder the grazing of Cattel, yet doth it grow so close and thick together, and is naturally so poisonous and offensive to grass, that you shall seldome see any grow where this Broom prospereth; besides, the bitterness thereof is so unpleasant and distastfull to all kind of Cattel, that not any will ever crop or bite upon the same, only it is of some necessary use for the poor Husbandman, in respect that it serveth him both for fuell, for thatching and the covering of his houses, (being for that purpose, of all, the longest lasting) and also for the making of Beesoms for clensing of the house and barnes, or else for sale and commodity in the Market; all which profits (as before I said) being compared with the loss of the ground, and the goodness that might be reaped from the same, are indeed truly no profits but hinderances.

Therefore I would wish every man that is Master of such grounds, whether they be over-run with Gorse, Furres, Broom, or any such kind of gross, woody, or substantial weed, first to cut

up

Destroying of Weeds.

up the weeds (of what sort soever it be, whether Gorse, Furs or Broom) as close and neer to the ground as you can possibly, and then making them up in sheats or bigge faggots, carry them home, and stack them up very dry, so as no rain may enter or pierce into them, for the smallest wet will rot and consume them to dirt and filthiness; which done, you shall make Labourers with hacks, picks, and such like tools, to stub up all the roots which you lett in the ground, even to the very bottom of the same; and these roots you shall be very carefull to have stubbed up exceeding clean, by no means leaving (so near as you can) any part or parcell of the roots behind you; then these roots thus stubbed up, you shall diligently gather together into little heaps, as bigge as Moal-hills, and place them upon the ground a pretty distance one from another, and so let them lye till the Sun and wind have dried them: for it is to be intended, that this labour must begin about the latter end of *April*, and beginning of *May*.

Then so soon as you find these roots are thorowly dryed, you shall pile them handsomely together, laying them a little hollow one from another, and then with a hack cut up some of the same earth, and therewithall cover all the roots quite over, only leaving a vent hole at the top, and on one side, and so let the hills rest two or three dayes, till the earth be a little parcht, and dried, then take fire and some other light dry fuel which is apest to blaze, and with the same kindle every hill, not leaving them till you see them perfectly on fire; which done, let them burn both day and night, till the substance being wholly consumed, the fire go out of it own self, and this in some Countries is called the *Burning of Bait*.

Burning of Bait.

Now as soon as the fire hath been extinguished for two or three dayes, you shall then come, and with shovels (and beetles to break the hard burnt earth in pieces) you shall spread all the ashes clean over the groudp; which done, you shall with a very long plough tear up the earth into great and deep furrowes, and divide it into Lands, as you shall think meet and convenient, laying them higher, and flatter, as you shall have occasion, and as the ground lyeth more or less within the danger of water, whether it be the over-flowing of some neer neighbouring Brooks,

Breaking of the burnt earth.

Brooks, or Rivers, or else other standing water occationed by Rain and extraordinary Showres, which must be carefully lookt unto; because all over-flows and inundations of water is a mighty destroyer and consumer of grain; but these barren grounds of which I now write, are very seldome oppresst with water; for most commonly they lye so high, that the continuall dryness thereof is a strong occasion of the much unfruitfulness. After you have thus burnt your bait, and plowed up your ground, you shall then with your hacks hack it into small pieces, in such manner as was declared in the former Chapter; then you shall (if the sea be any thing neer you) sand it with salt sand (as before said) then lime it, and after, manure it either with Ox-dung, Horse-dung, rotten Straw, mudd of Ponds and Ditches, the spitling of House-floores, or sweeping of Channel, and Streets, or such like; or for want of all these, in case you dwell neer unto the Sea-coast (where manure for the most part is in greatest scarcity, and the hardest to come by) you shall gather from the bottom of the rocks (where the seydge of the Sea continually beareth) a certain black weed, which they call Hemp-weed, having great broad leaves, and growing in great abundance, in thick tufts, and hanging together like pease-straw; and with these weeds you shall cover your lands all over of a pretty good thickness, and then forthwith you shall plow it again somewhat deeper, and with somewhat greater furrows then before, railing up the new quick earth to intermingle, and mix with those manures and helps which thou hast formerly prepared and laid upon the ground; then you shall again hack it, and harrow it; then you shall take Pigeons dung, or Pullens dung (that is, any kind of land fowl whatsoever, but by no means any water fowl) or Pigeons dung and Pullens dung mixt together, and allowing to every acre two or three bushels thereof, which is the true quantity of seed proportioned for the same, and this dung being broken and masht into small pieces, you shall put into your Syclop or Hopper, and in the same manner as you sow your corn, you shall sow this dung upon the ground, and then immediately after it you shall sow your Wheat, either steept in brine, or else salt Sea-water, or unsteept as you shall think good, but in case you can neither get salt sand

Causes of unfruitfulness.

An Excellent Manure.

Of Plowing.

Of divers Manures.

Mixture of Manures.

ſand nor Sea Rock-weeds, then you ſhall by no means omit the ſteeping of your Seed; neither ſhall you fail before you ſow your Seed, to mix with your pidgeons and pullens dung, a full equal part of Bay-ſalt well dryed and broke, and ſo ſown with the dung upon the land, and then the ſeed after it; which done, you ſhall harrow it again, clot it, ſleight it, and ſmooth it, in ſuch ſort as was formerly declared in the former Chapter, for theſe labours have no alterations, but muſt in all points be done as was before ſet down.

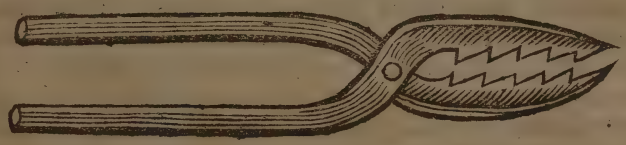
Of weeding.

Now touching the weeding of this earth, after the Corn beginneth to grow about the ground, there is no fear to be had either of Thiſtles, Tares, Cockles, Darnel, Docks, and ſuch like ſtrong weeds, which indeed are the iſſues of good grounds ill ordered and handled; but the weeds which you ſhall moſt fear in this place, is young Gorſe, or Furrs, or elſe young Broom, which are very apt to grow from the leaſt part or parcell of roots that ſhall be left behind; Nay the very nature of thoſe barren earths is ſuch, that of its own accord it will bring forth thoſe weeds: the cold ſharpneſs of the air mixing with the ſterility & roughneſs of the earth, being the cauſe that it will give life to no other better plants; therefore ſo ſoon as you ſhall behold any of them to appear above the earth, though they be not half a finger high, you ſhall preſently with all diligence pull them up by the roots, and caſt them away, or lay them in heaps that they may be afterwards burnt, and the aſhes ſprinkled upon the ground: And herein is to be obſerved, that the younger and the ſooner that you do pull up theſe weeds, the better it is, and the eaſilier they will come from the earth, and the ſooner be deſtroyed: for all thoſe mixtures wherewith already you have been taught to mix your earth, are in themſelves ſuch naturall enemies to all theſe kind of barren weed, that ſhould you omit the manual labour of deſtroying them (which no good husband willingly will do); yet in time the earth of it ſelf, and the often plowing of the ſame would leave no ſuch offence of weeds, or other growths which might hinder the corn.

Time for Weeding.

Now touching the beſt time when to pull away theſe weeds, though generally it muſt be done aſſoon as they do appear above the ground; yet it ſhall not be amiſs for you to defer the work

work till after a ſhowre of rain, and then immediately after the ground is wet) and ſo by that means more apt and willing to open and forſake the root faſtned within it) you ſhall with all diligence pull them out of the ground, and deſtroy them: neither ſhall you pull them out of the ground with your hands only; for the Gorſe have exceeding ſharp pricks, ſo that with your naked hands you are not able to touch them, and to arm your hands againſt them, with ſtrong thick gloves, would be too boiſterous and comberſome, ſo that ſometimes you might either miſs the weeds, and pull up the corn; or elſe pull up the corn and weeds both together; therefore to prevent all theſe caſualties or hinderances, you ſhall take a pair of long ſmall wooden Nippers, made after the form of this figure.



And with theſe you ſhall pull the weeds out of the ground, and caſt them into the furrows by the ſides of the Land, till your dayes work be finiſhed, and then with a rake you ſhall rake them together, and ſo lay them in heaps to dry and wither, in more convenient places; that when time ſhall ſerve, you may burn them, and uſe them, as was before declared.

Gathering of ſtones.

Laſtly, you ſhall have great reſpect, that if this ground be very much troubled with looſe ſtones, as flint, pibble, and ſuch like, that then you very carefully get them gathered from the ground, both before and after you have plowed it, and to lay them on heaps in other vacant places, where they may ſerve for pavings, and ſuch like purpoſes when time requireth: but if the ground be over-run with great, or elſe ſmall Limeſtones, as for the moſt part theſe barren grounds are; then ſhall you with all care gather them up, and lay them in great heaps in ſome corner of your field, where you may make a convenient Lime kiln, and ſo there burn theſe ſtones thus gathered, which will be

both an infinite profit, and an infinite eaſe to the reſt of your labours.

CHAP. IV.

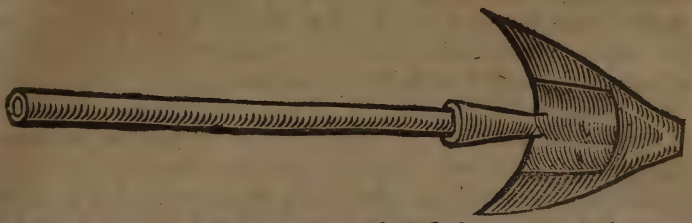
Of the ordering, Tilling, and Dreſſing of all rough barren Clayes, whether ſimple or compound, that are over-runne with Whinnes, or ſuch like.

NExt unto this barren Clay, which is over-run with Furſe, Broom, and ſuch like, I will place that barren and unfertile earth, being alſo a Clay, whether ſimple or compound, which is over-run onely with Whinns, and indeed bearing little or no other burthen, or if it do bear any other burthen as ſome little ſhort moſſie graſs, yet is that graſs ſo covered over with theſe ſharp Whinns, that not any beaſt dare put his noſe to the ground, or bite upon the ſame; and indeed this kind of earth is not any whit at all leſs barren than thoſe of which I have already written, but rather more, in that the malignant qualities thereof are not ſo ſoon corrected, nor yet the vertues ſo ſoon reſtored.

What whinnes are.

Whinnes are a certain kind of rough dry weeds, which grow buſhie and thick together, very ſhort and cloſe unto the ground, being of a dark brown colour, and of crooked growth, thick and confuſed, and full of knots, and thoſe knots armed with hard, long ſharp pricks like thorns or bryars, they have little brown leaves which ſhaddow the pricks, and do wind their branches ſo one into another, that they can hardly be ſeparated, yet is not their growth at any time little more than a handfull above the earth, only they ſpread exceedingly, and will runn and cover over a whole field, choaking up all ſorts of good plants whatſoever, and turning the beſt graſs that is, to moſs and filthineſs: wherefore if at any time you be Maſter of any ſuch naughty and barren ground, and would have it reduced unto goodneſs and fertility, you ſhall firſt take a fine thinn paring ſhovel made of the beſt iron, and well ſteeled, and hardned round about the edges, according to the form of this figure following.

And



And with this paring-ſhovel, you ſhall firſt pare up all the upper ſwarth of the ground, about two inches, or an inch and a half thick at the leaſt, and every paring would be ſome three foot in length at the leaſt, and ſo broad as the ſhovel will conveniently give it leave, and this ſwarth thus pared up, you ſhall firſt turn the Whinny or Graſs-ſide downward, and the earth ſide upward, and ſo let it lye two or three dayes in the Sunn to dry (for this work is intended to begin in the month of *May*) and when that ſide is well dryed, you ſhall turn the other ſide, and dry it alſo, then when all the ſwarth is dryed, you ſhall gather ſix or ſeven peeces together, and turning the Whinny or Graſs-ſide inward, and the earth ſide outward, you ſhall make round hollow little hils thereof, much according to the faſhion of this Figure following.

And the inward hollowneſs like unto the hollowneſs of an Oven, but much leſs in compaſs; which done, you ſhall fill the hollowneſs with dry chips, or ſmall ſticks, or Furſe and Straw

mixed together, which you ſhall put in at the vent-hole which ſhall be left on one ſide of the hill, and kindling it with fire, you ſhall burn all that ſwarth in ſuch ſort as you burnt the roots of your Furſe and Broom before; for this is alſo called a burning of bait, as well as the former; for it is a moſt principal nouriſher of the earth, and a very ſudden deſtroyer of all malignant weeds whatſoever.

Breaking of Baites.

After the burning of your hills, as ſoon as the fire is utterly quenched and gone out, and no heat at all left in the hills; you ſhall then with clotting beetles beat them all down to duſt, and then with ſhovels you ſhall ſpread the aſhes quite over all the ground, as was before declared in the former Chapter: and herein is to be noted, that you muſt place theſe hills as thick and cloſe together as by any means poſſibly you can, making your hills ſo much the leſs and lower, that they may ſtand thicker and nearer together, and ſo cover more ground, and thereby the heat and ſtrength of the fire to diſperſe it ſelf over all that peece of ground; for the fire burning upon the earth, doth as much good for the inriching of the earth, and deſtroying of the weeds, as the aſhes doth which are ſpread upon the ſame.

Plowing.

Now after your bait is in this manner burned and ſpread, you ſhall then (as was before ſhewed) plow up your ground in good large furrows, then hack it very ſmall, Sand it, Lime it, and manure it; and of all manures, there is not any better for this ground than Oxe-dung, and aſhes well mixt together; of which aſhes, thoſe of bean-ſtraw, Peaſe-ſtraw, or any other ſtraw are beſt; and thoſe of Wood; or Fern next, & thoſe of Sea-coal, or Pit-coal are the worſt of all. Swines dung is not much amiſs for this ground, for though it be a great breeder of weeds and thiſtles in good and fertile grounds, yet in this cold, hard, and barren earth it worketh no ſuch effect, but is a great comforter and warm moiſtner of the ſame.

After you have thus made your ground, as ſoon as Wheat ſeed-time commeth, which is the latter end of *September*, and beginning of *October*, you ſhall then with great care plow over your ground again, and take great reſpect that you turn up your furrows much deeper than before, and that for two ſpecial cauſes;

causes; the first, that the new earth may the better be mixt with the old earth, and those helps that are added thereunto; and secondly, that you may be sure to tear up the roots of all the Whinns from the very bottom of the earth, not suffering any part of them to remain behind, and for this purpose it shall not be amiss to have an idle boy or two to follow your plow, and to gather away all the roots that shall be torn up, or any way else left bare above ground, which roots shall be laid on heaps in convenient places, and then after burnt, and the ashes thereof spread upon the ground: which will be a very great comfort unto the seed, being a speedy help unto the sprouting thereof, and a very warm comforter of the root after the stemme is spindled above ground, for in these cold barren earths nothing doth so much spoyl and slay corn, as the dead coldness which lyeth at the root thereof; for in many of these unfertill places, you shall see Corn at the first sowing (whilst there is a little strength in the ground) sprout in great abundance, promising much hope of the profit: but when it should spindle and come to much better perfection, that poor strength being spent and consumed, and the cold and dryness of the soyl, having as it were over-come all matter of comfort, then presently you shall see the blade of the Corn turn yellow, the stemm or stalk to wither, and either put forth no ear at all, or else a very poor little empty one, being laden with nothing but a most dry chaffie husk without substance. But to come again to our purpose, after you have thus plowed up your ground the second time, you shall then hack it again, and harrow it, as was declared in the former Chapters; then you shall take your seed-wheat which hath been steept either in brine or Sea-water, and to every bushel of that seed you shall add a bushel of bay-salt, and mix them very well together in your Hopper or Sydlop, and so sow them together upon the ground, observing to double your cast so oft, that you may not fail to cast that true quantity of seed into the earth, which otherwise you would have done, if so be there had been no mixture at all, for to do otherwise were to deceive the ground, and a handfull of seed so saved would be the loss of a peck in the time of Harvest; therefore have great respect that your ground have his due; for it is no more

more coſt, though it be a little labour.

Harrowing. When your ſeed is ſown, you ſhall harrow it again the ſecond time, clot, ſmooth it, and ſleight it, as was before declared in the former Chapters.

Weeding. As touching the weeding of this ground, it is the leaſt labour of all other, for the earth being ſo corrected as is before ſhewed, it will naturally of it ſelf put forth no weeds, eſpecially if you remember to plough it deep, and be ſure to tear up and gather away all the quick roots, otherwiſe if that labour be any thing neglected, then will it put forth both Whins and great ſtore of other rough weeds, which as ſoon as you ſhall perceive to appear, you ſhall preſently with your wooden nippers pull them up by the roots, as was at large declared in the fore-going Chapter.

Profits. Now for the general profit of this ground thus made and prepared, it is the ſame that the two former are, that is to ſay, it will bear you good and ſufficient Wheat, in plentifull abundance for the ſpace of two or three years; then barley a year after; then Oats three years together after the barley; and peaſe or beans a year after the oats; then Laſtly, very good Meadow or Paſture for the ſpace of three or four years after, and then you ſhall begin and dreſs it again, as was formerly declared.

CHAP. V.

Of the ordering, Tilling, and Dreſſing of all barren Clayes, whether ſimple or compound, which are over-run with Ling or Heath.

THere followeth now ſucceſſively another ſort of barren earth, which indeed is much more ſterile and barren then any of the other formerly written upon; becauſe they, out of their own nature, do bear a certain kind of graſs or food which will relieve ordinary hard ſtore-Cattel, whether it be Sheep, Goats, or young Beaſts: But this earth, of which I am now to entreat, beareth no graſs at all, but only a vile filthy black brown weed, which we call Ling, or Heath, the tender tops whereof Cattel and wild Deer will ſometimes crop, yet it is to them but little relief, and only maintaineth life and no more.

Now

Now albeit ſome may object unto me, that this kind of ſoyl is ever a ſandy ſoyl, and no clay, as may be ſeen in moſt Chaſes, Forreſts, and Downs: yet I anſwer, that albeit it hold ſo in general, yet there are divers clayes, eſpecially in mountainous Countries, that are peſtered with theſe kind of weeds, as may be ſeen in the North, and North-weſt part of *Devonſhire*, in ſome parts of *Cornwall*, and in many parts both of North and South *Wales*; and theſe clay grounds which are thus offended with theſe weeds of Ling, or Heath, are much more barren and unfruitfull than the Sands, becauſe of their much more coldneſs; yet thoſe clayes which are mixed with either black Sand, dun Sand, or yellow Sand, and over-runn thus with Heath or Ling, are the moſt barren of all. To make any further deſcription of this Heath or Ling, being a thing ſo notoriouſly known over all this Kingdome, I hold it meerly needleſs, only to ſay it is a rough brown weed, ſhooting out abundance of ſtalkes from one root, with little dark leaves, and flowers on the top, of a pale reddiſh colour, much inclining unto Peach colour at the firſt: but being full blown, they are then a little more whitiſh.

Deſtroying of Heath.

You therefore that have any ſuch ground, and deſire to bring it to fruitfulneſs, and the bearing of good Corn and Graſs in a reaſonable abundance, you ſhall firſt with ſythes or ſharp hooks (but old ſythes are the better) cut down all the Heath, or Ling, which groweth upon the earth you intend to convert to goodneſs, ſo neer the ground as poſſibly you can; then when it is cut down (which would ever be at the beginning of the Month of *May*) you ſhall let it lye upon the ground, daily toſſing and turning it till it become very dry, then ſpreading it all over the ground, and mixing or covering it with dry ſtraw of any kind whatſoever, you ſhall preſently ſet it on fire in ſo many ſeveral corners of the field, that all the ſeveral fires in the end may meet in one poynt, and not leave any part of the mowen Heath or Ling unburnt, or any part of the ground unſcorched; After this is done, and the ground cooled, you ſhall with your flat clotting beetles beat the aſhes hard into the ground, then you ſhall take a ſtrong plow, with a broad winged ſhare, and an eaven coulter, and you ſhall plow up all this ground thus burnt

in

in very large and deep furrowes, by no meanes picking out any of the quick roots which ſhall remain in the furrows ſo turned up, but letting them reſt in the earth ſtill; then with your hacks, and the help of your iron paring ſhovel, you ſhall cut up the furrows, formerly turned up, into ſhort pieces, of three foot, or three foot and a half long, and ſome leſs as occaſion ſhall ſerve: then with theſe pieces, you ſhall build little hollow hills, ſuch as in the former Chapter you made of the upper ſwarth of the ground only; and then filling the hollowneſs with dry heath, and dry ſtraw mixt together, you ſhall ſet every hill on fire, and ſo burn the very ſubſtance of the earth into aſhes, which will ſoon be done by reaſon of the infinite number of roots and ſmall ſtrings, which lye mixt in the earth, and the dryneſs thereof occaſioned by the former burning: And this is another kind of burning of baite, much differing from all the former, and yet to as great end and profit as any whatſoever; and theſe hills muſt, as the former, be placed one as neer another as is poſſible, ſo as they may ſpread and cover over the greateſt part of the ground, and leaving no more than a good reaſonable path to paſs between hill and hill.

Another burning of Baite.

Now as ſoon as you have burned all your baite, and that your hills are cold, you ſhall then as was before ſhewed in the former Chapters, with beetles and ſhovels break down the hills, and ſpread the earth and aſhes over all the ground; which done, you ſhall ſand it (if the ſituation of the ground be anſwerable thereunto) and lime it in ſuch ſort as was ſhewed in the ſecond Chapter; then when it is limed, and the lime equally ſpread, not more in one place than in another, you ſhall then manure it with the beſt manure you can provide, of which there is none better or more proper for the ground than mans ordure, and the rubbiſh, ſweepings, parings, and ſpitlings of houſes mixt together: for want of this (becauſe it may not be in ſo great plenty as other manures) you may take either old Oxe dung, or Horſe dung, or for want of them, the old rotten and muddy ſtaddles or bottomes of Corn ſtacks of Reeds, eſpecially Peaſe-ſtacks, or Bean-ſtacks, provided that it be throughly rotten; for the leſs rotten it is, the worſe it is. Alſo the ſcourings of common Sewers, and eſpecially thoſe

through

through which much of mans urine doth pass is a most wonderfull and beneficial manure for these grounds, so are also the scowring of sinks and channels, which come from Kitchins and wash-houses, where great store of brine and salt broath is shed, and other greasie, fat, and putrified substances, as also abundance of sope-suds, and buck-ashes, and other sope and lee-washings, than which, there is no better manure that can be used for these kind of grounds.

After your ground is thus perfectly made and manured, and that Wheat seed time doth draw on, which (as before was shewed) is ever at the latter end of *September*, you shall then plow up your ground again in that manner as was shewed for the former earths, to wit, much deeper than before: for you are to understand, that this ground being drest, as is before declared, there will remain nothing of the furrows which were first plowed up but the ashes, which being covered with sand, lime, and manure, the earth will lye plain and level, so that of necessity you must raise up new furrows of new earth, which being done, you shall then with your hacks, cut all the new earth into very small pieces, mixing them well with the other mould made of sand, lime, manure and ashes; then as was before said, you shall harrow it to make the mixture so much the better, and the mould so much the finer: and then if it have been sanded, you may sow your seed-wheat simply of it self, without any doubt of the plentifull increase thereof; but if it have not been sanded, then as in the foregoing Chapter, you shall not only steep your Seed in brine (as before shewed) but also you shall mix your Seed with Bay-salt, and so sow it into the ground; or if at the time of sowing (after it is plowed, hackt, and harrowed) you bestow either Pigeons dung, or Pullens dung, or Sheeps dung upon the land, it will be much better, and the corn will give a much greater increase. Now as soon as your land is sown, you shall then forthwith harrow it again, and cover the seed very close; then you shall clot it, smooth it, and sleight it (as was before shewed.)

As touching the weeding and cleansing of this earth after the Corn is sprung up, you shall understand, that there is great care to be had thereunto, for this ground is much subject unto weeds, Weeding.

and those of the worst kind: for although for the most part it will be free from all manner of soft and tender weeds, as thistles, cockle, darnel, ketlocks, docks, rape, and such like herball stuff, yet it is much subject to twitch bryars, which grow at both ends, Ling, Wild-time, and such like, any of which as soon as you shall see to appear, or peep above the earth, you shall presently with your Nippers pull them up by the roots, and not suffer them in any wise to look a handfull above the ground; for if you do, their hardness is so great, and their roots so large & fast fixt into the mould, that you can by no means pull them away without great loss and hurt to the grain, pulling up with them all such roots of Corn, as shall be fixed near about them: for any other weak and superfluous things which shall grow from the Land, you may with ordinary weeding hooks cut them away; as for long grass, whether it be soft or sedgie, or any other such like stuff, you shall not stirr it, but let it grow: for it keepeth warm the roots of your Corn, and giveth nourishment and increase thereunto. Now for the profit of this soyl thus ordered and husbanded, it is equal with any of the former, and will bear Wheat very plentifully for the space of the three first years; good Barley the fourth year, with the help of the sheep fold (as was before said) and good Oats the fifth, sixth and seventh years; and very good small Pease, the eighth year (for beans this soyl will very hardly bear at all) & the ninth, tenth, and eleven year it will bear very good meadow (though not altogether very fine pure grass, yet very good feeding & wholsom grass) or so good pasture as a man can reasonably require for any holding Cattel whatsoever; nay, it will also indifferently well feed, and fat Cattell, though peradventure it requireth a little longer time than other finer ground will.

CHAP. VI.

Of the ordering, Tilling and Dressing, of all plain simple barren Sands, bearing nothing but a short mossie grass.

HAving thus (in as large manner as I hope shall be needfull for any judicious or indifferent Reader) written of the Natures, Orderings, Plowings, and Dressings of all manner of barren

ren and unfruitfull Clayes, whether they be ſimple of themſelves, or elſe compounded with other earths, as Sands, Chalks, Gravels, and ſuch like; ſhewing by thoſe naturall burthens which continually of their own accord they do produce (which indeed is the eaſieſt and ſafeſt way of knowledge) how to amend and better them, and bring them to that perfection of fruitfulneſs that the beſt earth ſhall but in a very ſmall degree exceed them, nay, hardly any thing at all, except in the ſaving of a little charge and ſome labour, without which nothing is to be obtained by the Husbandman; neither is this charge or labour thus beſtowed on theſe barren grounds to be grutcht at by any honeſt mind; ſince the worſt crop of ten or eleven, will make good his charge and toyle with a reaſonable intereſt; ſo that I make account, nine or ten years profits come into his barns without purchaſe, for it is to be intended, that all theſe earths formerly ſpoken of, are not to be dreſt, or to put the Husbandman to any charge more than the firſt year of ten or eleven, for the ſecond year he ſhall as ſoon as he hath gathered his Wheat off, which will be in *Auguſt*, and finiſht other parts of his Harveſt, preſently put his Plow into the ſame Wheat-ground again, and plow it up, hack it, and harrow it, ſow it, harrow it again, clod it, and weed it, as in the former year, and ſo conſequently of all the reſt of the years following, whereby you perceive that all labours and charges are ſaved more than once plowing and ſowing.

This then conſidered, it neceſſarily now followeth that I ſpeak of the bettering, and bringing, into perfection, of all manner of barren ſand grounds, being ſimply of themſelves, without any mixture of other earths, except one and the ſame kind, as ſand with ſand, though peradventure the colours of the ſands may alter: as red with white, yellow with black, &c. which in as much as the whole ſubſtance is ſand without any contrary mixture, there it may well be called ſimple and not compound; and of theſe ſands, I purpoſe to intreat, as formerly I did of the clayes; that is to ſay, by their outward faces and Characters, which are thoſe burthens and increaſes, which of their own proper nature, without any help or compulſion of any others, they produce and bring forth into the World.

And first of that naughty cold and barren sand which lying upon high, stony, and mountainous Rocky places, or else upon lower cold bleak Plaines, subject to the North, and North-East winds and tempests, or bordering upon the Seas, doth not bring forth any thing but a short mossie grass, which the Sun maketh bitter, and the cold dews fulsome and unsavory in tast. If any man then be master of such unprofitable and unfruitfull earth, and desire to have it brought to goodness, and perfection, you shall first, at the beginning of the Spring, as about middle *April*, or earlier, with a strong Plow answerable to the soyle, yet somewhat less, both in timbers and irons, then that wherewith you plow your Clay ground, plow so much of that earth up as you may conveniently compass, to sow and dress exactly, and perfectly for to undertake more, were to make all unprofitable, and to cast away much labour and charge, without any profit. This ground you shall plough of an indifferent depth, though not so deep as the Clays, you shall lay the furrows, though flat, yet close one to another, without leaving any bulk between, but ploughing all very clean, yet not so very clean and close together, that you may lay the green swarth, to the new ploughed or quick earth; but rather turn one swarth against another, so as the furrows may lye, and no more but touch the edges one of another: This when you have done, you shall then with your hacks, cut and break all the earth so turned up into very small pieces, and not only the earth so turned up into very small pieces, but also other green swarth which was left unplowed; provided that before this labour of hacking, you let the ground lye certain dayes in the furrows, that one swarth heating and scalding the other, they may both equally rot and grow mellow together: which once perceived by the blackness thereof, you may then at your pleasure hack it, and cut it, as is before declared.

Plowing.

Objection. Now some may in this place object unto me, that this labour of hacking should be needless, in as much as all sand grounds whatsoever are out of their own nature so light, loose, and willing to dissever, that this toyl might very well and to good purpose be saved.

Answer. To this I answer, that true it is, most sands in their own natures

tures are looſe, and light, and willing to diſſever into fine mould without any extremity, eſpecially rich and fruitfull ſands, whoſe predominant Quality of warmth, giveth nouriſhment and increaſe: but theſe barren and cold ſands, in which is a certain flegmatique toughneſs, and moſt unwholſome dryneſs, are of a clean contrary nature, and through the ſtony hardneſs thereof, they are as unapt to break and diſſever, as any Clay whatſoever: beſides, the ſwarth being of a tough moſſie ſubſtance (which ever carrieth a hard ſtrong root anſwerable with the cold in which it is ingendred) doth ſo conſtantly bind, fetter, and hold the mould together, that it is impoſſible for any harrow to break it in peeces, or to gather from it ſo much mould as may ſerve to cover the Corn, and give it root when it is ſown into the ſame: And therefore this work of hacking is neceſſary.

Of Marling.

When therefore you have thus hackt your land, and diſtributed the mould into many ſmall peeces, you ſhall then with all expedition Marle it; which foraſmuch as it is no general nor common practice in every part of this Kingdome, I will firſt tell you what Marl is, and then how to find it, digg it, and uſe it for your beſt behoof.

Additions.

Marl, you ſhall then underſtand, is (according to the definition of Maſter *Bernard Palliſſy*) a natural, and yet an excellent ſoyl, being an enemy to all the weeds that ſpring up of themſelves, and giving a generative vertue to all ſeeds that are ſown upon the ground: or (for the plain Husbandmans underſtanding) it is a certain rich, ſtiff, and tough clay of a glewie ſubſtance, and not fat or Oyly, as ſome ſuppoſe. This Marl is in quality cold and dry, and not hot (as ſome would have it) and it was earth before it came to be Marle, and being made Marle, yet it is but a Clay ground, all Chalk whatſoever was Marl before it was Chalk, and all manner of ſtones which are ſubject unto Calcination or burning, as Lime-ſtone, Flint, or the like, were firſt Marl before they were ſtones, and only hardned by accident, and ſo not poſſible to be diſſolved but by the fire: as for Marl it ſelf, when it is a little hardned, it is onely diſſolved by froſts, and nothing elſe, and thence is the cauſe that Marl ever worketh better effect the ſecond year than the firſt.

This Marl hath been made ſo precious by ſome writers, that it

it hath been accounted a fifth element, but of this curiosity I will not now dispute.

Touching the complexions or Colours of Marle, there is some difference; for though all conclude there are four several colours in Marle, yet one saith, there is a White, a Gray, or Russet, a Black and Yellow; another saith, there is a Gray, a Blew, a Yellow, and a Red; and a third saith there is a Red, and White, mixt like unto Porphery. And all these may well be reconciled, and the colours may alter according to the climate and strength of the Sun: So that by these Characters, the colour, the toughness, and the looseness when it is dryed, any man of judgement may easily know Marl, from any other earth whatsoever. This Marle is so rich in it self, and so excellent for continuance, that it will maintain and enrich barren grounds, the worst for ten years, some for a dozen, and some for thirty years; yet there is a great respect to be had in laying of this Marl upon the ground, that is to say, that you lay it neither too thick nor too thinn, that you give it neither to much, nor too little; for any of these extremities are hurtfull; and therefore hold a mean, and see there be an indifferent mixture between the Marle and the earth, on which it is laid.

For the generall finding out of this Marle, there is no better way for readiness, and the saving of charges, than by a great Augure or wimble of Iron, made to receive many bits one longer than another, and so wresting one after another into the ground to draw out the earth, till you find you are come to the Marle, which perceived, and an assay taken, you may then digg at your pleasure.

Now for the places most likely where to find this Marle, it is commonly found in the lowest parts of high Countries, neer Lakes and small Brooks, and in the high parts of low Countries, upon the knols of small hills, or within the Clifts of high Mountainous banks, which bound great Rivers in: To conclude, you shall seldome find any of these barren sands but they are either verged about with Marle grounds, or if you will bestow the labour to digg below their sand, you shall not faile to find either Marl, or some quarry of stone, or bo[illegible]; for in some places Marle lyeth very deep, in other some places within

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a Spades graft of the upper ſwarth of the earth : therefore it ſhall be good for you to make proof of all the moſt likely parts of your ground to find out this Marle ; and as ſoon as you have found it out, you ſhall with Mattocks and Spades digg it up and carry it to your land, there laying it in bigg round heaps, and ſetting them within a yard or two one of another ; thus when you have filled over all your ground (which would be done with as great ſpeed as might be, for the antient cuſtome of this Kingdome was, when any man went about to Marle his ground, all his Tenants, Neighbours and Friends, would come and help him to haſten on the work) you ſhall then ſpread all thoſe heaps, and mixing the clay well with the ſand, you ſhall lay all ſmooth and level together ; and herein is to be obſerved, that if the land you thus Marle ſhall lye againſt the ſide of any great Hill or Mountain, whereby there will be much deſcent in the ground ; then you ſhall (by all means) lay double as much Marl, Sand, or other compoſt on the top of the Hill as on the bottom, becauſe the rain and ſhowrs which ſhall fall, will ever waſh the fatneſs of the earth down to the loweſt parts hereof.

Now in the laying of your Marle, you are to hold this obſervation, that if you lay it on hard and binding grounds, then you are to lay it in the beginning of Winter : but if on grounds of contrary nature, then it muſt be laid in the Spring, or Summer. Again, you ſhall obſerve, that if you cannot get any perfect and rich Marle, if then you can get of that earth which is called Fullers earth, and where the one is not, commonly ever the other is, then you may uſe it in the ſame manner as you ſhould Marl, and it is found to be very neer as profitable.

When your ground is thus Marled (if you be neer to the Sea-ſide) you ſhall then alſo ſand it with ſalt ſea-ſand, in ſuch ſort as was formerly declared, onely you may forbear to lay altogether ſo much upon this Sand ground as you did on the Clay ground, becauſe an half part is fully ſufficient. If you cannot come by this ſalt-ſand, then inſtead thereof, you ſhall take chalk, if any be to be had neer you, and that you may lay in more plentifull manner than the ſand ; and albeit it is ſaid, that

Additions : Obſervations.

Of Chalk and the uſe.

that Chalk is a wearier out of the ground, and maketh a rich father, yet a poor son; in this soyl it doth not so hold, for as it fretteth and wasteth away the goodness that is in Clay grounds, so it comforteth and much strengthene-h the sand-earths: and this Chalk you shall lay in the same manner as you did your Marl, and in the same manner spread it and level it; which done, you shall then Lime it, as was before shewed in the Clay grounds: yet not so abundantly, becaufe also a half part will be sufficient; after your Liming, you shall then manure it with the best manure that you have, whether it be dung of Cattel, Horse, Sheep, Goats, Straw, or other rubbish; and that being done, and seed-time draweth on, you shall then plow up your ground again, mixing the new quick earth and the former soyles so well together, that there may be little distinguishment between them: then you shall hack it again, then harrow it, and lastly sow it with good, sound, and perfect seed: and of seeds, though Wheat will very well grow upon this earth, yet Rye is the more naturall and certain in the increase: yet according to the strength of the ground, you may use your discretion, observing that if you sow Wheat, then to steep it before in brine or salt sea-water, as was before described; but if you sow Rye, then you shall sow it simply without any helps, except it be Pigeons-dung, or Bay-salt simply of it self, in such manner as hath been before declared, either sowing the salt with the Corn, or before the Corn, as shall seem best in your own discretion.

After your seed is sown, you shall then harrow it again, clot it, smooth it, and sleight it, as before is shewed in the second Chapter, which done (after the Corn is shot above the earth) you shall then look to the weeding of it, being somewhat a little too much subject to certain particular weeds, as are Hare-bottles, wild Chess-bolles, Gypsie-flowers, and such like, any of which, when you see them spring up, you shall immediately cut them away close by the roots; as for tearing their roots out of the ground with your Nippers, it is not much materiall, for the cutting of them is sufficient, and they will hardly ever again grow to do you any hindrance; many other weeds there may grow amongst these, which are also to be cut away, but these are the principal, and of most note; whereof as soon as you have cleansed

sed your lands of these and the rest, you shall then refer the further increase of your profit unto Gods providence.

Lastly, you shall understand that this groundbeing thus plowed, drest, and ordered, will without any more dressing, but once plowing and sowing, every year bear you good Wheat or good Rye three years together; then good Barley the fourth year; good Oats, the fifth sixth and seventh years; excellent good Lupins the eighth year, and very good Meadow or Pasture three or four years after, and then it shall be necessary to dress it again in such manner as was before described. The profits.

CHAP. VII.

Of the Plowing, Tilling, Ordering, and inriching of all Barren Sand, which are laden and over-runn with Braken, Fern, or Heath.

NExt unto this plain, cold, barren Sand, which beareth no other burthen but a short mossie grass, I will place that Sand which is laden and over-runn with Braken, Fern, or Heath, as being by many degrees more barren than the former, both in respect that it is more loose and less substantial, as also in that it is more dry and harsh, and altogether without nutriment, more than an extreme sterile coldness, as appeareth by the burthen it bringeth forth, which is Braken or Fern; a hard, rough, tough weed, good for nothing but to burn, or else to litter store beasts withall, for the breeding of manure; or if you strow it in the high wayes where many travellers pass, it will also there turn to good reasonable compost.

Of this kind of ground, if you be master, and would reduce it unto fertillity and goodness, you shall first, whether the braken be tall and high (as I have seen some as high as a man on horseback) or short, and low (and indeed most commonly these barren earths are, for tall Fern or Braken shews some strength in the ground) you shall with sythes first mow it down in the month of *May*, then wither it and dry it upon the ground, and after spread it as thinn as you can over all the earth you intend to plow; which done, you shall bring your plow and begin to plow the ground after this order: first you shall turn up your furrow, Of destroying braken.

and lay it flat to the ground, green ſwarth, againſt green-ſwarth, then look how broad your furrow is ſo turned up, or the ground ſo covered; and juſt ſo much ground you ſhall leave unplowed between furrow and furrow, ſo that your land may lye a furrow and a green balk, till you have gone over all the ground; then you ſhall take a paring-ſhovel of Iron, and pare up the green ſwarth of all the balks between the furrows at leaſt two inches thick, and into pieces of two or three foot long, and with theſe pieces of earth, and the dry Fern which is pared up with them, you ſhall make little round hollow bait hils as in the third or fourth Chapters; and theſe hills ſhall be ſet thick and cloſe over all the ground, and ſo ſet it on fire and burn it; then when the fire is extinct, and the hills cold, you ſhall firſt with your hacks cut in pieces, all the furrows that were formerly turned up, and then break down the burnt hils, and mix the aſhes and earth with the other mould very well together; which done, you ſhall then with all ſpeed marl this earth as ſufficiently as poſſibly may be, not ſcanting it of Marle, but beſtowing it very plentifull upon the ſame; which done, you ſhall then plough it over again, and plowing it exceeding well, not leaving any ground whatſoever untorn up with the plow; for you ſhall underſtand, that the reaſon of leaving the former balks, was, that at this ſecond plowing after the Marl was ſpread upon the ground, the new, quick, and unſtirred freſh earth might as well be ſtirred up to mix with the Marl, as the other dead earth and aſhes formerly received, whereby a freſh comfort ſhould be brought to the ground, and an equal mixture without too much dryneſs, and this ſecond Ardor or plowing would begin about the latter end of *June*.

Of Marl.

Sanding and Liming.

After your ground hath been thus marled, and the ſecond time plowed, you ſhall then ſand it with ſalt Sea-ſand, Lime it, and manure it, as was declared in the foregoing Chapter: and of all manures for this ſoyl; there is not any ſo exceeding good as ſheeps manure, which, although of the Husbandman it be eſteemed a manure but of one year, yet by experience in this ground it hapneth othewiſe, and is as durable, and as long laſting a compoſt as any that can be uſed, and beſides, it is a great deſtroyer of Thiſtles, to which this ground is very much ſubject, because

cauſe upon the alteration of the ground the Fern is alſo naturally apt to alter unto thiſtle, as we daily ſee.

When your ground is thus dreſt, and well ordered, and the Seed-time commeth on, you ſhall then plough it again in ſuch manner as you did the ſecond time, that is to ſay, very deep, Cle, and after the manner of good Husbandry, without any reſt, balks or other diſorders; then ſhall you hack it very well, then harrow it, and then ſow it, but, by mine advice, in any caſe, I would not have you to beſtow any Wheat upon this ſoyl, (except it be two or three buſhels on the beſt part thereof, for experience ſake, or proviſion for your houſhold) for it is a great enemy unto Wheat, and more than the marl: it hath no nouriſhment in it for the ſame, becauſe all that commeth from the ſalt Sand, Lime, and Manure, is little enough to take away the natural ſterility of the earth it ſelf, and give it ſtrength to bear Rye, which it will do very plentifully; and therefore I would wiſh you for the firſt three years onely to ſow the beſt Rye you can get into this ground; the fourth year, to ſo barley; the fift, ſixt and ſeventh, Oats; and of Oats, the bigg black Oat is the beſt for this ground, maketh the beſt and kindlieſt Oat-meal, and feedeth Horſe or Cattel the ſoundeſt; as alſo it is of the hardeſt conſtitution, and endureth either cold or dryneſs much better then the white Oat, the cut Oat, or any Oat whatſoever; the 8th year, you ſhall only ſow Lupins, or Fetches; and three years after, you ſhall let it lye for Graſs, and then dreſs it again as before ſaid; for it is to be underſtood, that in all the following years (after the firſt year) you ſhall beſtow no labour upon this ground, more than plowing, ſowing, hacking, and harrowing at ſeed-time only. Plowing and Sowing.

But to proceed to the orderly labour of this ground, after you have ſown your Rye, you ſhall then harrow it again, clot it, ſmooth it, and ſleight it, as was before ſhewed in the ſecond Chapter of this book. And although a man would imagine that the ſandy looſeneſs of this ſoyl, would not need much clotting, or ſleighting of the Earth, yet by reaſon of the mixture thereof with the Marl and Manure, it will ſo hold and cleave together, that it will ask good ſtrong labour to looſen it, and lay it ſo hollow and ſmooth, as in right it ſhould be. Labours after Sowing.

Weeding.

Touching the weeds which are moſt ſubject to this ſoyl, they are Thiſtles, and young Brakes, or Ferns, which will grow up within the Corn, which, before they riſe ſo high as the Corn, and even as it were at the firſt appearing, you muſt with your wooden Nippers pull up by the roots, and after take up and lay in ſome convenient pace where they may wither and rot, and ſo turn to good manure.

CHAP. VIII.

Of the Plowing, Tilling, Ordering, and Enriching of all barren Sands which are laden and over-runn with Twitch, or Wild Bryar.

HAving written ſufficiently of this hard and barren, waſt, wild, ſandy ground, which is over-run with Braken, Fern, Heath, and ſuch like. I will now proceed, and unto it joyn another ſand which is much more barren, and that is the ſand that bringeth forth nothing but wild Twitch, Bryars, Thorn-buſh, and ſuch like under-growth, of young miſliking wood, which never would riſe or come to profit, the bitter cold drineſs of the earth wherein it groweth, and the ſharp ſtorms to which the clime is continually ſubject both day and night, blaſting it in ſuch manner, that nothing appeareth but ſtarved, withered, and utterly unprofitable burthens, good for nothing but the fire, and that in a very ſimple ſort. Such grounds if you be Maſter of, and would reduce it to profit and fruitfulneſs, you ſhall firſt with hooks, or axes, cut up the upper growth thereof, that is, the buſhes, young Trees, and ſuch like; then you ſhall alſo ſtub up the Roots, not leaving any part of them behind in the earth, carrying away both home to your houſe to be imployed either for fuel, or the mending of the hedges, or ſuch like, as you ſhall have occaſion; this done, you ſhall take a pair of ſtrong iron harrowes, and with them you ſhall harrow over all the earth, tearing up all the Twitch, Bryars, and rough graſs ſo by the roots, that not any part but the bare earth may be ſeen; and when your harrows are cloyed, you ſhall unlade them in ſeverall places of the ground, laying all ſuch rubbiſh of weeds, and other ſtuff which the harrowes ſhall gather up in a little round

Deſtroying of Twitch and Bryar.

round hill, close up together, that they may sweat, wither and dry; then spreading them abroad, and mixing them well with dry straw, burn them all over the ground, leaving no part of the weeds or grass unconsumed; then, without beating in of the ashes, you shall presently plow the ground all over very clean as may be, laying the furrows as close as you can one to another, and leaving no earth untoucht or untorn up with the plough; which done, you shall immediately hack it into small pieces, and as you hack it, you shall have idle boyes to go by the hackers, to gather away all the roots which they shall loosen or break from the mould, and laying them on heaps in the worst part of the ground, they shall there burn them, & spread the ashes thereon; after your ground is thus harrowed, plowed and hackt, you shall then muck it, as was formerly shewed in the sixt Chapter; then shall you sand it, lime it, and manure it as before-said.

Now of Manures, which are most proper for this soyle, you shall understand, that either Ox, or Horse manure, rotten straw, or the scouring of Yards is very good, provided that with any of these manures, or all these manures, you mix the broad-leaved weeds, and other green weeds, which do grow in Ditches, Brooks, Ponds, or Lakes, under Willow-trees, which with an iron Rake, Drag, or such like instrument, you may easily draw upon the banks, and so carry it to your Land, and there mingle it with the other manure, and so let it rot in the ground; this manure thus mixed is of all other most excellent for this soyle, both by the experience of the Antients who have left it unto memory, as also by daily practise now used in sundry parts of this Kingdome, as well because of the temperate coolness thereof, which in a kindly manner asswages the lime and sand, as also through moysture, which distilling through those warm soyles doth quicken the cold starved earth, and giveth a wonderful encrease to the seed, that shall be thrown into the same. Manure.

After your ground is thus sufficiently drest with these soyles and manures, you shall then plow it again the second time, which would be after *Michaelmas*; after the plowing you shall then hack it again, and be sure to mix the earth and the manures very well together, then you shall break it in gentle manner Harrowing, and other labours.

with

with your Harrows, and then sow it; which done, you shall harrow it much more painfully, and not leaving any clots or hard-earth unbroken that the Harrow can pull in pieces: as touching the seed, which is fittest for this earth, it is the same that is spoken of in the next foregoing Chapter: as namely, the best Rye, or the best Maslin, which is Rye and Wheat equally mixt together, or if there be two parts Rye, and but one Wheat, the seed will be so much the more certain and sure holding; and this seed you may sow on this ground three years together, then Barley, then Oats, and so forth, as is formerly writ of the grounds foregoing. After your ground is sown and harrowed, you shall then clot it, sleight it, and smooth it as you did the other ground before; and then lastly with your back Harrows (that is, with a pair of harrows, the teeth turned upward from the ground, and the back of the harrow next unto the ground) you shall run over all the ground, and gather from the same all the loose Grass, Twich, or other weeds that shall any wayes be raised up, and the same so gathered you shall lay at the lands end in heaps, either to rot for manure, or else at the time of the year to be burnt for ashes, and sprinkled on the earth the next seed year.

Lastly, touching the weeding of this soyl, you shall understand the weeds which are most incident thereunto, are all the same you first went about to destroy; as namely, Twitch, rough wild Grass,& young woody undergrowth,besides Thistles, Harebottles,and Gypsie flowers; therefore you shall have a great care at the first appearance of the Corn, to see what weeds arise with it, (for these weeds are ever fully as hasty as the Corn)and as soon as you see them appear, both your self and your people with your hand shall pull them up by the roots, and so weed your land as you would weed a Garden, or Woad ground. Now, if at this first weeding (which will be at the latter Spring, commonly called *Michaelmas*, or the Winter spring,) you happen to omit and let some weeds pass your hands unpulled up (which very well may chance in so great a work) you shall then the Spring next following (seeing them as high, or peradventure higher than the Corn) with your wooden nippers pull them up by the roots from the ground, and so cast them away.

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As touching the cutting them up close by the ground with ordinary weed-hooks, I do in no sort allow it; for these kind of weeds are so apt to grow, and also so swift in growth, that if you cut them never so close in the Spring, yet they will again over-mount the Corn before Harvest, and by reason of their greatness, toughness, and much hardness, choak and slay much Corn that shall grow about them; and therefore by all means you shall pull these weeds up by the roots whilst they are tender (if possible you can) or otherwise in their strongest growth, sith their sufferance breedeth great loss and destruction.

CHAP. IX.

Of their Plowing, Tilling, Ordering, and Enriching of all barren Sands, which are over-run with Moors, or morish stinking long Grass.

UNto these foregoing barren Sands, of which I have already written, I will lastly joyn this last barren sand, being of all earths, whether Clay or Sand, the most barren. And that is that filthy, black, moorish Sand which beareth nothing but stinking putrified Grass or Moss, or Moss and Grass mixed together, to which not any beast or cattel, how coorsly or hardly bred soever, will at any time lay their mouths; and this kind of ground also is very much subject to marshes and quagmires, of which that which is covered with Moss, or Grass, is the worst, and that which is tufted above with Rushes, the best, and sooneſt reduced unto goodness; in brief, all these kind of grounds generally are extremely moyst and cold, the superabundance whereof is the occasion of the infinite sterility and barrenness of the same.

And therefore he that is Master of such unprofitable Earth, and would have it brought to some profit or goodness, shall first consider the situation of the ground, as whether it lye high or low; for some of these marish grounds lye low in the Valleys, some on the sides of hills, and some on the tops of Mountains: then, whether the much moistness thereof be fed by River, Lake, or Spring, whose veines not having currant passage through, or upon the earth, spreads lookingly over all the

the face thereof, and ſo rotting the mould with too much wet, makes it not only unpaſſable, but alſo utterly unprofitable for any good burthen.

Grounds for Fiſh-ponds.

Now if you find that this mariſh Earth lye in the bottom of low valleys, as it were garded about with hills, or higher grounds, ſo that beſides the feeding of certain Springs, Lakes, or Rivers, every ſhowr of rain or falling of water from higher grounds bringeth to theſe an extraordinary moiſture to maintain the rottenneſs, in this caſe this ground is paſt cure for graſs or Corn, and would only be converted, and made into a fiſh-pond, for the breeding and feeding of Fiſh, being a thing no leſs profitable to the Husbandman for keeping his houſe, and furniſhing the markets than the beſt Cornlands he hath; and therefore when he maketh any ſuch pond, he ſhall firſt raiſe up the head thereof in the narroweſt part of the ground, and this head, by driving in of ſtakes, and piles of tough and hard wood, as Elme, Oak, and ſuch like, and by ramming in of the earth hard between them, and ſadding the ſame ſo faſt that the mould can by no means be worn down, or undermined with the water, he ſhall bring it to as firm earth as is poſſible, and in the midſt of this head he ſhall place a ſluce or flood-gate made of ſound and clean Oak timber, and plancks, through which at any time to drain the pond when occaſion ſhall ſerve; and this done, you ſhall digge the pond of ſuch depth, as the earth conveniently will bear, and caſting the earth upon either ſide, you ſhall make the banks as large and ſtrong as the ground requireth; then if any ſpring which did before feed the earth be left out of the compaſs of the pond (becauſe it lyeth too high to be brought in) then ſhall you by drawing gutters or draines from the ſpring down to the pond, bring all the water of the ſprings into the pond, and ſo continually feed it with freſh and ſweet water. Then ſtoring it with fiſh of beſt eſteem, as *Carp*, *Tench*, *Beam*, *Pearch*, and ſuch like, and keeping it from weeds, filth and vermine, there is no doubt of the daily profit.

But if this mariſhand low ground, though it lye low, and have many ſprings falling upon it, yet it lyeth not ſo extreame low but that there is ſome River or dry Ditches bordering upon it, which lye in a little lower deſcent, ſo that except in caſe of inun-

inundation the river and ditches are free from the moisture of this ground, but where there is any over-flowing of waters, there this marsh ground must needs be drowned; in this case, this ground can hardly be made for Corn, because every over-flow putteth the Grain in danger, yet may it be well converted to excellent pasture or meadow, by finding out the heads of the Springs, and by opening and cleansing them, and then drawing from those clensed heads, narrow drains or furrows, through which the waters may pass to the neighbours ditches, and so be conveyed down to the low Rivers: leaving all the rest of the ground dry, and suffering no moistures to pass, but what goeth through these small deep Channels; then as soon as Summer commeth, and the ground begins to harden, if you see any of the water stand in any part of the ground, you shall forthwith mend the drain, and help the water to pass away; which done, (as the ground hardneth) you shall with hacks and spades lay the swarth smooth and plain, and as early in the year, as you can conveniently, you shall sow upon the ground good store of Hay-seeds, and if also you do manure it with the rotten staddles or bottoms of hay-stacks, it will be much the better, and this staddle you shall not spread very thick, but rather of a reasonable thinness, that it may the sooner rot and consume upon the same.

Draining of wet grounds.

But if this marsh and filthy ground do not lye so low as these low valleys, but rather against the tops of hills; you shall then, first open the heads of all the springs you can find, and by several drains or sluces, draw all the water into one drain, and so carry it away into some neighbouring ditch and valley; and these drains you shall make of a good depth, as at least two foot, or 2 foot and a half, or more, if need require, and then cross-wise every way overthwart the ground, you shall draw more shallow furrows, all which shall fall into the former deep drains, and so make the ground as constant, and firm as may be: then having an intent to imploy it for corn, you shall bring your Plow into the ground, being a very strong one, and not much differing in Timber-work, or Irons from that which turneth up the Clay-grounds, and laying before the Plow long waddes, or rouls of the straw of Lupins, Pease, or else Fetches, (but Lupins is

the beſt) you ſhall turn the furrows of the earth with the plow upon the wades, and ſo cover or bury them in the mould, and thus do unto every furrow, or at leaſt unto moſt of the furrows you turn up, and ſo let it lye a little time to rot, as by the ſpace of a fortnight or three weeks, in which ſpace, if the ground receive not rain and moiſture enough to rot the ſtraw thus formerly buried, you ſhall then by ſtopping the drains, and making the Springs over-flow, gently waſh the ground all over and no more, & then preſently drain it again; which done, as ſoon as the earth is dry, you ſhall hack it, and brake it into ſmall pieces, and then you ſhall alſo ſand it, lime it, and manure it.

And laſtly, you ſhall Marl it, but if no ſalt ſand be to be had, then inſtead of it you ſhall chalk it, yet of all the reſt you ſhall take the leaſt part of chalk.

This done, about the latter end of *July* you ſhall plow up the ground again with ſomewhat a better and deeper ſtitch than you did before, that if any of the ſtraw be unrotted, or unconſumed, it may again be raiſed up with the new moyſt earth, and ſo made to waſt more ſpeedily; and if at this ſecond carrying you do ſee any great had clots to riſe, then with your hacks you ſhall break thoſe hard clots in pieces, laying the Land clean without clots, weeds, or any other annoyance, and ſo let it reſt till *October*, at which time you ſhall plough it over again, hack it, harrow it, and then ſow it with the beſt Seed-wheat; for this ſoyl thus dreſt and manured, albeit it be of all other the moſt barren, yet by reaſon of this moyſture, which at pleaſure may be put to it, or taken from it, and by the mixture of theſe comfortable ſoyles and compoſts, it is made as good and fruitful as any earth whatſoever, and will bear Wheat abundantly for the ſpace of three years together, then good Barley the fourth year, with a little help of a Sheep-fold, or Sheeps manure: then Rye the fift year; Oats the ſixth, the ſeventh and eighth years; ſmall Peaſe the ninth year; good meadow or paſture three years following, and then to be new dreſt again, as beforeſaid.

Harrowing. Now as ſoon as your Seed-Wheat is ſown, you ſhall then harrow the ground again, and be ſure to cover the Wheat both deep and cloſe; as for the clots, which ſhall ariſe from this ſoyl,

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it shall not matter whether you break them or no, for by reason of their moysture, they will be plyant and easie for the Wheat to pass through, so that you shall not care how rough your land lye, so it lye clean, and the Corn well covered; but for all other seeds, you shall break the clots to dust, and lay the land as smooth as may be.

Now for the weeding of this soyl, you will not be much troubled therewith, because this ground naturally of its own accord putteth forth no weeds, more than those which are ingendred by the new made fruitfulness thereof, and those weeds for the most part are a kind of small sedge, or hollow reed; any of which if you see appear, or with them any other kind of weed, you shall at the first appearance, either pull them up by the roots with your woodden nippers, or else cut them close by the ground with your weed-hooks. Weeding.

CHAP. X.

A general way for the enriching of any poor arable ground, either Clay or Sand, with less charge than formerly.

IF the former demonstrations and instructions which I have shewed thee, appear neither too difficult, or too costly (for now I speak to thee plain, simple, poor Husbandman) and yet thou art master of none but barren earth, then thou shalt by thine own industry, or the industry of thy Children, Servants, and such like, or by contracting with Taylors, Botchers, or any poor people that will deserve a penny, gather up, get or buy all the rags, shreds, old base pieces of woollen cloth whatsoever, which are onely cast, and fit for nothing but the Dung-hill, and of these thou canst compass but a sackfull, or a sackfull and a half, it is sufficient for the dressing of an acre of arable ground. These shreds & rags (torn small) or hackt and hewed into small pieces or bits, thou shalt thinly spread over the land before fallowing time, then comming to fallow, plough them all into the ground, & be sure to cover them, then give your land the rest of its ardors, as stirring, soyling, ridging, &c. in their due seasons, and after an husbandly manner: then when you come to sow it, you shall take Raggs of wollen cloath.

Steeping of ſeed corn.

the ſlimie thick water which commeth from dung-hills, or for want thereof, water in which Cow-dung hath been ſteeped, and therein you ſhall ſteep your ſeedcorn; that is to ſay, if it be barley, you ſhall ſteep it for the ſpace of thirty ſix hours, or thereabouts; if it be Wheat, but eighteen hours; and if it be Peaſe, but twelve hours; for Rye, or Oats, not at all: and the ſeed thus ſteeped, you ſhall ſow it according to good Husbandry, and there is no doubt of wonderfull increaſe.

Or any pulſe.

There be others which take the Seed corn, and ſteeping it in good ſtore of Cow-dung, and water, ſtir altogether for an hour in the morning, and an hour at night, and then being ſetled, drain the water from the ſeed and the dung, and the next morning ſow the corn and the dung both together on the land, being ſure not to ſcant the Land of Seed, and no doubt the increaſe will be wonderfull.

Now if this cannot be conveniently done, or that you want dung, if then you take ordinary water, and therein ſteep your ſeed, it is good alſo, and eſpecially for barley, and is approved by daily experience.

Shaving of Horn.

But now me-thinks, I hear the poor man ſay, that here is but one acre dreſt, and that is a ſmall proportion; to this I anſwer, if thou beeſt able but to dreſs one acre with theſe wollen raggs, thou ſhalt then ſearch among the Horners, Tanners, Lanthorn-makers, and ſuch like, and get all the waſt ſhavings of horn which thou canſt poſſibly compaſs, as before of the rags, ſo of theſe a ſack and a half, or two ſacks will dreſs an acre: theſe ſhavings (which are indeed good for no other uſe) you ſhall ſcatter upon the land as you did the rags, then plow them in after the ſame manner, ſo order the ground, ſo ſow, and in the ſame manner ſteep the ſeed, and queſtionleſs the increaſe will be wonderfull great: Theſe manures will laſt five years without any renewing. Now if of theſe you cannot get ſufficient to trim all your ground, you ſhall then deal with Butchers, Sowſe-women, Slaughter-men, Scullions, and the like; and from theſe you ſhall get all the hoofs you can, either of Ox, Cow, or Bull, Calf, Sheep, Lamb, Deer, Goates, or any thing that cheweth the cud, and which indeed, if not for this uſe, are otherwiſe utterly caſt away to the dunghill, and deſpiſed: And theſe hoofs you

Hoofs of cattell.

you ſhall cut and hew into ſmall pieces, and ſcatter thick upon your land at fallowing time, then plow them in, as aforeſaid, and do in all points as with the other manures already recited, and ſo ſteep your ſeed, and there cannot be a greater inricher of arable ground whatſoever.

Now if all theſe will not yet compoſt your land, you ſhall then ſee what ſope-aſhes you can ger, or buy, for of all manures there is none more excellent, for beſides, it giveth an exceeding ſtrength and fatneſs to the Land; it alſo killeth all manner of weeds, great and ſmall, as Broom, Gorſe, Whinnes, and the like, and it killeth all manner of Worms, & venemous creeping things; it is excellent for Woad, and the ground renewed yearly, therewith may be ſown continually: Theſe ſope-aſhes muſt be laid on the Land after fallowing, and then ſtirred in; two load thereof will ſerve to dreſs an acre: when it is fit for ſeed, the ſeed muſt be ſteept as aforeſaid, and then ſown, and the increaſe will quit the charge manifold. Theſe ſope-aſhes are alſo excellent good for Hemp, and Flax, being thinly ſown upon the Land, after it is plowed, and immediately before the Seed be ſown: but if you have more Land to dreſs, then you muſt make uſe of your own ordinary manure, as is Ox-dung, Horſe-dung, and the like, which that you may make richer and ſtronger than otherwiſe of its own nature it would be, you ſhall cauſe continually to be thrown upon it, all your powdred beef broth, and all other ſalt broths or brines, which ſhall grow or breed in your houſe; alſo all manner of ſoap ſudds, or other ſudds, and waſhings, which ſhall proceed from the Laundery, and this will ſo ſtrengthen and enrich your manure, that every load ſhall be worth five of that which wanteth this help. There be divers other manures, which do wonderfully enrich and fatten all manner of barren grounds, as namely, the hair of beaſts hides, (which for the moſt part, Tanners and Glovers do caſt away) this thinly ſpread on the Land, and plowed in, brings every year a fruitfull crop. Again, if Braken, or Fern be layed a foot thick upon the earth, and then a layer of earth upon it, then another layer of braken, and a layer of earth upon it, then another layer of braken, and another layer of earth, and ſo layer upon layer, till the heap be as bigg as you intend it, and ſo left to rot all the Winter following, there cannot be a better

Of Woad.

The enriching of ordinary manure.

The hairs of beaſts hides.

Of braken.

ma-

manure for any arable ground; for you ſhall underſtand, that the earth will ſo rot the braken, and the braken ſo ſoak into the earth, that they will become both one rich ſubſtance. And herein you ſhall note, that whenſoever you would have any ſubſtance (of what condition ſoever) quickly to rot, and turn to manure, that the only way is, to mix it with earth, and that will in ſhort ſpace bring it to rottenneſs. Now this braken and earth thus rotted you ſhall lay upon your land as you do your ordinary dung of Cattel, and then ſow your ſeed being ſteept as aforeſaid.

To rot dung quickly.

Of Malt-duſt. Next, your Malt-duſt, which is the ſprout, come, ſmytham, and their excrements of the Malt, as an excellent manure for arable land, allowing three quarters thereof for an acre, and ſtrowing it upon the land after it is plowed, and ready to be ſown.

Of Rotten Pilchers and garbage. There is another manure which albeit it is not plentifull every where, yet in ſome places it is, and not inferior to any manure before ſpoken of, and that is your rotten Pilchers, after the oyl is taken from them, & the carcaſſes caſt to the dunghill, this laid on the land, and plowed in, bringeth Corn in great abundance; and no leſs doth the carcaſſes, and garbage of all kind of fiſh whatſoever, eſpecially of ſea-fiſh.

Of b'ood offals. Laſtly, the blood entralls, and offall of any beaſt, is an excellent manure of any kind of grain, plant, or tree, but eſpecially for the Vine, for to it there is no nouriſhment of greater force or efficacy: alſo, if this blood be tempered with lime, it is exceeding comfortable for grain, and deſtroyeth worms, and other creeping things, which hurt Corn, only it muſt not be applyed preſently, but ſuffered for a little time to rot, leſt the too much heat thereof might ſcorch and do hurt to the root of the Corn: this manure is to be laid on the earth when you ſow it, and ſow the ſeed, and it harrowed or plowed in together; which done, after the order of good workmanſhip, there is no doubt of the encreaſe.

CHAP.

CHAP. II.

How to Enrich for Corn, any barren, rough, wooddy ground, being newly ſtubbed up.

IF you have any barren wooddy ground, which is newly ſtubbed up, and that you would convert it to arable, you ſhall then take a great quantity of the underwood, or worſt bruſh wood which was cut from the ſame, and in the moſt convenient place in the field, as in the midſt, or near thereabout, you ſhall frame it into a broad hollow pile, and then cover it all over with great ſodds of earth; which done, ſet fire on it, and leave no part thereof (either wood or earth) unburnt, then take thoſe aſhes and ſpread them all over the field, ſo far forth as you mean to plough up, then with a good ſtrong plough fallow the ground as deep as you can, and ſo let it reſt till it be almoſt *May*; then take either Fern, Stubble, Straw, Heath, Furrs, Sedge, bean ſtalks, or any other waſt growth, take I ſay, either any one, or more of theſe, or altogether, as you ſtand poſſeſt of them, and burn them to aſhes, and therewith cover your land the ſecond time, and then in ſummer ſtirr it within a Month, after ſoyl it, then at the beginning of *October*, or a little before, plough it again, and ſow it with Rye the firſt crop, and you ſhall ſee the increaſe will be very plentifull; the next year you may ſow it with Wheat, the third year with Barley, the fourth year with Peaſe, Lupins, Fetches, or any other pulſe, and then begin with Wheat again; for it is credibly ſaid, that this manner of dreſſing theſe barren, wooddy grounds, ſhall maintain and keep the earth in good heart, and ſtrength in the worſt places, for the ſpace of four years, in that which is in any thing reaſonable for the ſpace of ſix years, and where there is any ſmall touch of fertility, for the ſpace of ſixteen years; of which there are daily experiences in *France*, about the forreſt of *Arden*, and ſome with us here in *England*, in many woody places.

Wood aſhes.

Aſhes of Fern, Straw, &c.

CHAP.

CHAP. XII.

The manner of reducing and bringing into their first perfection all sorts of ground, which have been over-flowed, or spoiled by salt-water, or the Sea-breach, either arable or pasture, as also the enriching, or bettering of the same.

The difficulty of this labour.

THere is nothing more hard or difficult in all the art of husbandry, then this point of which I am now to intreat; as namely, the reducing and bringing unto their first perfection all sorts of grounds, which have been over-flowed, or else spoiled by the Sea-breach, and bringing in of too great abundance of salt-water, which to some men of little experience, and free from those dangerous troubles, may appear a matter very sleight, and the wound most ealie and curable; and the rather, because in all my former relations, and demonstrations, touching the bettering of every several sort of ground, I do apply, as one of my chiefest ingredients, or simples, by which to cure Barrenness, Salt-sand, salt-weeds, salt-water, salt-brine, Ashes, Lime, Chalk, and many other things of salt nature, as indeed all the manures and marles whatsoever, must either have a salt quality in them, or they cannot produce fruitfulness, so that to argue simply from natural reason; If salt be the occasion of fruitfulness, and increase, then there cannot be much hurt done by these over-flowes of the salt-water, that it should rather add a fattening and enriching to the ground, then any way to impoverish it, and make it incapable of growth or burthen. But experience, (which is the best Mistriss) shews us the contrary, and there is nothing more noisome and pestilent to the earth, then the super-abundance, and too great excess of saltness; for according to our old Proverb, of *omne nimium*, that too much of every thing is vitious, as we see in the state of man's body, that your strongest poysons, as *Antimony*, or *Stibium*, *Coloquintida*, *Ruberb*, and the like, taken in a moderate measure, are most healthfull, and expell those malignant qualities which offend the body, and occasion sickness; but taken in the least excess that can be devised, they then (out of their vitious and naughty qualities) do suddenly and violently destroy all health, and bring upon the body

The vertues of Salt.

The vices which come from Salt.

body inevitable death, and mortality; so is it with this matter of salt, and the body of the earth; for as by the moderate distributing thereof, it correcteth all barren qualities, disperseth cold, and naughty vapours, and yieldeth a kind of fatness and fruitfulness, whereby the Seed is made more apt to sprout, and the ground more strong or able to cherish the same, till it come to perfection, through the sharp, warm, and dispersing quality thereof; so being bestowed in too great abundance and excess, whereby the earth is surfeited, and as it were overcome, and drowned up with too much of this natural goodness, and helpfull quality, then all his proper vertues turn to egregious vices, as his wholsome sharpness to a fretting, gnawing, and destroying greediness, his comfortable warmness to a consuming and wasting fierineſs, and his gentleness in dispersing to an infectious and venemous pollution, by the joynt qualities of all which together, the ground is made neither fit to receive any thing from the hand of the Husbandman, nor yet to produce or bring forth any of it self, because every good quality is abused or expelled, and nothing but unnaturalness, and sterility left, which like a Serpent lodgeth in the ground, and will suffer no good thing to have society with it: And these are the effects and mischiefs which are occasioned by these Sea-breaches, or inundations of the salt-water.

The abuse of salt in excess.

It is certain, that although in the salt marshes, where the Sea commeth in at certain times, and onely washeth or sprinkleth the ground all over, and so departeth, there is neither want of grass, nor yet complaint of any evill quality in the grass; yet it is most certain, that no overflow of salt-water, how little or moderate soever, can be truly said to be wholsome for any kind of grass ground whatsoever; for grass is compounded of an infinite world of plants and simples, and most of them of several natures and qualities, so that if it give nourishment to one, yet it may destroy ten; neither do I find it by any of the Ancients, simply and properly applied unto the grass grounds, but first unto the arable, in which having spent its primary, or first strength upon the seed, (which is a great and greedy devourer, or eater up of the strength, and fatness of the earth) it then prepares, and makes the ground more able and fit to bring

Of salt moderately used.

No overflow of salt water good for grass.

The grounds of the salt Marshes.

forth grass, and that of the best and finest kind: for although the Masters of the Salt-marshes find a singular and rare profit in those grounds for the feeding, breeding, fatting, and sustaining of their great Flocks of Sheep; which upon these salt grounds, they say will never rot or perish by that universal disease, yet must they not impute it to the great quantity, goodness or any growth in the grass, but to the salt which they lick up in the grass, aud to the salt quality of the grass, which is not onely an Antidote or preservative against that noysome and pestilent mortality, but also a delightfull and pleasant food wherein those Cattell take more contentment then in any other thing whatsoever; so that I must necessarily rest upon this conclusion, that as but moderate washing and overflowing of Salt-waters are no certain or particular great helps unto grass-grounds, especially if they be applyed thereuuto, and to that purpose simply at the first, without any other preparative or working by a former means, as by tillage, digging, delving, or the like; so the exceeding great inundation or Sea-breaches which lye long soaking and sinking into the earth, must needs be a certain infallible, and almost incurable cause of barrenness, eating, spoyling, and consuming the very roots of all manner of plants, trees, and growths, by which the ground is made utterly incapable of generation or bringing forth: and therefore where these great inundations or over-flowings cannot be either prevented or avoyded, but as the seasons of the year they do and must hold their courses, there I would not wish any man to bestow either his labour or his cost, for it is loss of time, and loss of substance: but where it is to be prevented or avoided by industry, or that those over-flowing or Sea-breaches come and happen by casualty or change, as either by the unnaturalness and superabundance of tydes being driven in by the violence and impretuousness of outragious winds, or by any neglect or breach in the Sea-wall, or other mishaps of the like nature, which hapneth sometimes scarce once in an age, at the most not above once or twice in many years; in these cases there is most certain remedy, and the ground so spoyled and wasted may by art and industry be again reduced and brought to the former perfection and goodness; nay, many times amended and freed

A true cause of barrenness.

Where this annoyance is nicurable.

Where it is curable.

freed from many faults and ſterile qualities, to which it was either naturally addicted, or elſe by chance and accident grew thereunto, by continuall wearing and imployment without reſt or refreſhing, by the artificiall meanes of wholſome manures, or other ſtrengthnings which ought to be applyed before thoſe faults grow in extremities.

Now touching the cure of theſe grounds which are thus worn out, decayed, and made barren by theſe inundations of Salt-water, the owner thereof is firſt to draw into his conſideration, that as the malignity and evill quality of the earth is grown by too much fretting, gnawing, and waſting of the Salt, ſo it muſt be allayed and qualified by a quite contrary condition, which is freſhneſs: the contrary then to ſalt-water, muſt of neceſſity be freſh water, ſo that you are to caſt about your judgement, and by the view, ſituation, and level of the ground (which for the moſt part can have but little difficulty in it, becauſe theſe grounds upon which the Sea thus breaketh, muſt ever be the loweſt of all other, ſo that a true deſcent comming unto it, and a true aſcent comming from it, there is no hardneſs to convey any water-courſe thereunto) look how to bring a freſhneſs which may conquer and overcome this fatneſs, and that muſt therefore be freſh water, which by channels, ditches, furrowes, ſluces, and the like, you may bring from any freſh river, ſpring, pond, or other freſh water-courſe (though removed ſome diſtance of miles from the place to which you would convey it) to the very place to which you deſire to have it, and with this freſh water you ſhall waſh and gently drown over ſo much of your ſpoyled ground as you ſhall be able reaſonably to deal withall, in other coſts and labour for that year; and if you have plentifull ſtore of freſh water, then having (as I ſaid) drowned it over gently, about four inches, or half a foot deep, you ſhall ſo let it lie two or thre dayes, then drain away that water by the help of back ditches, or by ſluces made for that purpoſe, which if the ſituation of the ground deny you, and that there is no ſuch convenient conveyance, then you ſhall in the loweſt part of the ground (either joyning upon ſome other ſpoyled ground, or upon the Sea-wall or bank) place a Coy, which may either caſt the water into the other ground, or elſe over the wall

The manner of the cure.

One contrary helps another.

The watering with freſh water.

How to drain away the freſh water.

How oft to drown the earth.

and bank into the Sea; and having thus drained away the first water, you shall then open your sluces of fresh water again, and drown your ground over the second time, and do in all things as you did before, and thus according to the plentifallness of your fresh water, you shall drown your ground, or at least wash it over with fresh water twice a week, before the beginning of the spring, and if the salt water have lain long, or be but new departed, then you shall use your fresh water, for some part of the Spring also.

Helps, if fresh water be wanting.

Now some may object unto me here, (and it is a matter altogether unlikely) that in some of these places, where these Inundations and breaches are, it is impossible either to find fresh water, and to bring fresh water unto them, because all the springs for many miles about, being made naturally blackish, and the rivers by the infection of the salt tides, having lost the greatest part of their sweet freshness; the question now resteth, whether these brackish waters are wholesome for this purpose, I or no? To this I must needs answer, that they cannot in any wise be good for these spoiled grounds, because the earth naturally is of an attractive and drawing condition, sucking and gathering unto it self any thing that is of a sharp sweet, or sower tast, and especially saltness, so that being covered with those brackish waters, it will draw from them onely their salt, (of which it hath too much already) and no part of the freshness which should qualifie and amend it: therefore, if either your ground be thus situated, or your necessities thus unsupplied, it is better, that you rather forbear this labour of washing or drowning your earth, (though it be the first, the speediest and surest cure of all other) than by watering it with infinite and unwholesome waters, rather encrease the mischief, than any way delay it.

Whether brackish water be wholsome.

The first time of plowing, and the observations therein.

How to mix earth.

After you have watered your ground, (if it be a work possible to be attained unto) or otherwise neglected, (it being a thing not possible to be found) you shall then about the latter end of *March*, plow up all the ground with a good deep stitch, turning up a large furrow, and laying it into lands, raise them up as much as you can, and make them round, then look

of

of what nature or temper the earth is, as whether it be find ſand, rough gravell, ſtiff clay, or a mixt earth, or any of theſe contraries together; If it be a fine ſand, either white, red, or brown, it matters not whether, then you ſhall take any clay earth which is free from theſe ſalt waſhings, being of a mean or ſmall ſtiffneſs, and likewiſe of as mean and little richneſs, which being digged out of ſome bank, pit, or other place where leaſt loſs is to be had, you ſhall carry it in tumbrels or carriages to the new plowed ground, and there firſt lay it in heapes as you do manure, then after ſpread it all over the Land, and being dry, with clotting beetles break it as ſmall as you can poſſibly, for this hungry Clay being of no rich and fat condition, will ſo ſuck and draw the ſalt into it, that it will take away much of the evill quality, and mixing his tough quality with the looſe condition of the ſand, they will both together become apt for fruitfulneſs and generation.

If the ſpoyled ground be a rough hard gravelly earth, then you ſhall mix or ſpread upon it the beſt and richeſt freſh Clay you can get, or if there be any ſuch fruitfulneſs near about you, then with a good blew Marl; for that is the cooleſt and the freſheſt, and will the ſooneſt draw out the ſalt from the gravell, and give it a new nouriſhment, whereby any ſeed ſhall be fed and comforted which is caſt into it. The mixture of Gravell.

If the ſpoyled earth be of its own nature, a ſtiff and tough Clay, which is but ſeldome found ſo neer the Sea-ſhore, then after the plowing you ſhal mix it, and cover it over with the freſheſt and fineſt Sand that you can poſſibly get, for that will not only ſeparate the Salt from the Clay, and take away the naturall toughneſs and ſtiffneſs of the ſame, which hindereth and ſuffocateth the tender ſprouts, ſo as they cannot eaſily get out of the earth, but alſo by lending a gentle warmth, will aſſwage the cold quality of the clay, and make it bring forth moſt abundantly. The mixture of Clay.

Laſtly, if the ſame ſpoyled earth be of a mixed quality, then you ſhall look whether it be binding or looſening. If it be binding, then you ſhall mix or cover it with fine freſh ſand; if looſening, then with a reaſonable rich and tough clay, for ſo you ſhall bring it to an open and comfortable temper, making The mixture of mixt earth.

it

it able both to receive, cheriſh, and bring forth the ſeed; which before either too much wet, or too much dryneſs did ſtifle and bind up within the clots and mould, ſo as it had no ſtrength to bear it ſelf through the ſame.

The ſecond plowing.

When you have covered your lands with this mixture, you ſhall then plow it over again before Midſummer, turning the new laid earth unto the old earth, and as ſoon as that labour is finiſhed, you ſhall then lade forth your manure or compoſt unto it, in which you are to have a great care what manure you

Election of manures.

elect for that purpoſe, for it is not the richeſt and fatteſt manure as your Pigeons-dung, or Pullens-dung, Lime, Chalk or aſhes, your Horſe-dung, your ſhovelings upon high waies, your beaſts hoofs, your horn ſhavings, your Hemp-weed, or any other weed which groweth near the ſeydge of the ſea, neither your Ox, or Cow-dung, though of all before named, that is the beſt, which doth the moſt good upon theſe ſpoyled grounds, becauſe they have all in them a ſtrong quality of ſaltneſs or ſharpneſs, which will rather add then diminiſh the evill quality of the earth, but in ſtead of theſe, you ſhall take the mud of dryed bottoms of

The beſt manures.

Lakes, Ponds, and Ditches of freſh water, and the moyſture or wetter ſuch mud or bottoms are, the better it is, or ſtraw which is rotted by ſome freſh water-courſe, rain, or the like: by no meanes that which is rotted by the urine or ſtale of horſe or cattle, for that is the ſalteſt of all other, or you may take any weeds which you ſee grow in freſh Rivers, Ditches, Ponds, or Lakes, eſpecially thoſe which grow at the bottoms of Willow, Sallow, or Oſier trees, or you may take the old raggs of wollen cloth, or any other manure which you know to be the woolleſt or freſheſt, and with any of theſe, or all of thoſe together,

The ordering of the manure.

you ſhall very plentifully cover your ground all over, and immediately upon the covering or laying on, ſee you preſently plow it, land after land; for to give it any long reſpit after it is ſpread, the Sun out of his attractive and ſtrong naturall will exhale and draw out all the vertue from your manure, and ſo ſpoyl much of your labour.

The third plowing.

When you have thus manured it, and plowed it, you may then let it reſt till Michaelmas, at which time you may plow it the laſt time, and then ſow it with the ſtrongeſt and hardeſt

Wheat

Wheat you have, of which the white Pollard is the beſt, & there is no queſtion but if it be ſafe from a ſecond inundation, your crop will both be plentifull & rich, and alſo acquit and pay largely for all your former charges. The ſecond year you need but onely plow it as aforeſaid, and then ſow it with good Hemp-ſeed, and be aſſured you will have a brave crop ariſe thereof, then the third year you ſhall plow it as flat as you can, ſtill throwing it down, and not raiſing it up at all, and then ſow it with the beſt Oats you can get, according to the nature and ſtrength of your Country, and be ſure to harrow it well, and to break every clot, and make the mould as fine as is poſſible, and the next year after your Oats, lay it for graſs, and I dare be bold, it will bear reaſonable meadow; yet would I not have you this year to preſerve it for that purpoſe, but rather to graze it with Sheep or Cattell, eſpecially Sheep, of which I would have you lay on good ſtore; for it matters not how neer or cloſe to the ground they eat it; for the next year it will become to the fulneſs of perfection, and be as profitable or more profitable ground than ever it was, and then you may apply or accomodate it for what uſe they pleaſe, either arable, Meadow, or for continuall grazing.

The ſecond year ſowing and third.

Laying the earth for graſs.

Of grazing.

And thus much touching the manner of reducing again, and bringing unto their firſt perfection, all ſorts of grounds which have been over-flowed, or ſpoyled by Salt-water, or the Sea-breaches, whether it be arable or paſture; as alſo the enriching or bettering of the ſame.

CHAP. XIII.

Another way to enrich barren Paſtures, or Meadows, without the help of water.

IF your barren Paſtures or Meadows be ſo ſeated, that there is no poſſible means of waſhing or drowning them with water, you are then only to reſtore and ſtrengthen them by the efficacy of manure or ſoyl, without any other help, and this may divers wayes be done, as by thoſe manner of manurings, which I have formerly treated of. But to go a better, and briefer way to work, and more for the eaſe and capacity of the plain Husbandman,

Clay manure.

bandman, whensoever you shall be possest of these barren pastures, if the barrenness proceed from sand, or gravel, then some Husbands use to manure the pasture over with the best clay they can get, first laying it in heaps, then spreading it, and lastly, with clotting beetles breaking it into as fine dust as they can get it, and this labour, they commonly perform as soon as they can after Harvest, when the latter spring is eaten, and the earth is most bare; but if the barrenness proceed from an hungry, cold, and

Mooriſh earth.

dry clay, then the manure is with the best mooriſh black earth which they can get, or with any moist manure whatsoever, especially, and above the rest, when the soyl that is digged out of old ditches, ponds, or dried up standing lakes, and this earth must be laid plentifully upon the ground in manure heaps, as aforesaid, that is to say; first in great heaps, then after broken and dispersed over the whole ground, and lastly, broken into small dust, and mixed with the swarth of the ground, and this labour, as the other generally performed after the Harvest, as a time of most convenience, and giving the earth a fit respit to suck in the strength and comfort of the new earth, and also having all the Winter after with his frosts, snowes, and showers, to mellow, ripen, and mix together one earth with the other: and doubtless this is a most exceeding good Husbandry, and not to be refeld or carpt against by any knowing or sound judgement; onely it is not the most absolute, or best of all ways whatsoever, but that others may be found somewhat more near, and somewhat more commodious.

The best way to enrich pasture or meadow.

Therefore, whensoever you shall be owner of any of these barren pastures, or meadows, of what nature or condition soever the earth be, whether proceeding from gravell, sand, clay, or pestered with any other malignant quality whatsoever, to reduce it to fertility and goodness in the shortest time, and to the most profit, about the Month of *March*, when all pasture grounds are at the bareſt, and do as it were remain at a stand between decreasing and increasing, you shall begin then to lead forth your manure for the refreshing of these Earths, and the manure which you shall carry unto these grounds, shall be the soyl of streets within Cities or Towns, or the parings and gatherings up of the high-wayes, much beaten with travell, also the earth

The soyl of the streets or high-waies

for

for two or three foot deep, which lyeth under your dung-hill when the dung is removed, and carryed away, for this is most precious and rich mould, and is not alone excellent for this use, but also for the use of Gardens, for the strengthing and comforting of all sorts of tender plants, and for the use of Orchards, for the comforting both of old and young Trees, when at any time their Roots are bared, or otherwise when there groweth any misslike or decreasing. Earth under Dung-hills. To enrich Gardens or Orchards.

You shall also take the fine earth or mould which is found in the hollow of old Willow trees, rising from the root up almost to the middle of the Tree, at least so far as the tree is hollow, for than this, there is no earth or mould finer or richer. The mould of Willow in Trees

Of all these manures, or of as many as you can conveniently get, you shall lead forth so much as may very plentifully manure & cover your ground all over; you shall first lay it on the earth in reasonable big heaps, that the Sun may not exhale the goodness out of it, and then at your best leisure, & so soon as you can conveniently, you shall spread it Universally over the field, dispersing it as equally as you can, unless your field be more barren in one place than in another, which if it be, then you shall lay the greatest plenty where it is most barren, and the less where you find the greatest fertility; yet, by all means, see you scant not any place, but give every one his due; for to do otherwise would shew much ill husbandry.

Now it is the use of some Husbandmen, that what mould or earth is laid out from six a clock in the morning, till three of the clock in the afternoon, that they make their Hinds spread in the evening before they go to supper; and questionless it is a very good course, and worthy to be imitated of every good Husband.

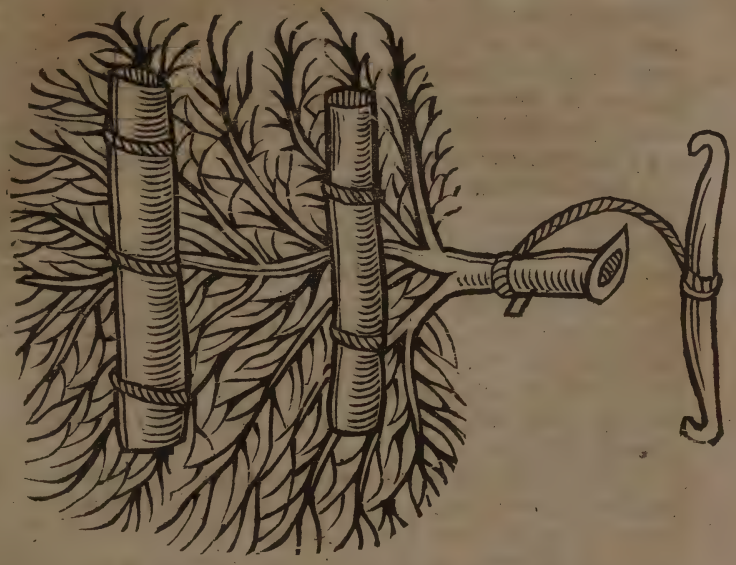
After you have laid forth your mould, and spread it all over your pasture or meadow, then you shall make some boyes, girles, or other people, to pick and gather up all the stones, sticks, or other unnecessary matter which might happen to be led forth with the mould, and to pick and lay the pasture so clean as is possible; which done, it is to be intended, that yet notwithstanding this ground will lye exceeding rough, both in respect of the clots of earth, which will not eaſily be broken, as also in re-

ſpect of naturall roughneſs of theſe rich moulds, which at this time being digged up in the wet, will not eaſily be ſeparated or diſſolved, and therefore when you have finiſhed the labours beforeſaid, you ſhall let the clots reſt till the Sun and weather have dryed them, then after a ground ſhowr (obſerving to take the firſt that falleth) you ſhall harrow your ground over, after this manner.

A new way of Harrowing.

You ſhall cut down a pretty big white Thorn-tree, which we call the Hauthorn-tree, and make ſure that it be wonderfull thick buſhie and rough grown; which done, you ſhall plaſh it as flat as you can, and ſpread it as broad as you can, and thoſe branches or boughes which of neceſſity you muſt cut in ſunder, you ſhall again plaſh and thruſt into the body of the Tree, binding them with cords or withs ſo faſt thereto, that they may by no means ſcatter or ſhake out, and if any place appear hollow or thin, and cannot come to lie hard, firm, and rough upon the ground, then you ſhall take other rough buſhes and thruſt into the hollow places, and bind them from ſtirring alſo, till you have made your plaſh full and equall in all places, and that all the roughneſs may be as in a flat levell equally touch the ground; when you have thus proportioned your Harrow, you ſhall then take great loggs of wood, or pieces of timber, and with ropes bind them on the upper ſide of this rough Harrow, that the poiſe or weight of them may keep the rough ſide hard, and firm to the earth, and then the Harrow will carry this proportion or figure.

To



To the big end of this harrow, you ſhall fix a ſtrong rope with a Swingle-tree with Treats, Coller, and Harneſs, and one Horſe is fully ſufficient to draw it round about the Paſture or Meadow: ſo with this Harrow you ſhall harrow the ground all over, and it will not onely break all the hard clots to a very fine duſt, but alſo diſperſe them and drive them into the ground, and give ſuch a comfort to the tender roots of the young graſs, that newly ſpringing, that it will double and treble the increaſe. And for mine own part, this experience I my ſelf have ſeen upon an extream barren Paſture ground in Middleſex, where none of theſe good moulds or ſoyles could be got; but this Husbandman was fain to take all the rubbiſh and coorſe earth even to the very ſweepings of his yard, and for want of enough thereof, to take any ordinary earth he could get, and with it he dreſt the ground in ſuch ſort as I have now laſt ſhewed you, and this being done in *Aprill*, he had in *June* following as good Meadow as could be wiſht for, and was the firſt Meadow I ſaw cut down in all that Country: from whence I draw

Of Rubbiſh and ſweepings.

draw this conclusion, That where these better moulds or soyls are not to be had, if yet notwithstanding you take any ordinary mould or earth whatsoever, and with it repleniſh your Pasture or Meadow ground as is before shewed, that without doubt you shall find an infinite commodity, and profit thereby; for even the rule of Reason, and generall experience shews us, that any fresh or quick mould comming to the root of the Grass, when it is in springing, must needs be an infinite comfort thereunto, and make it prosper, and shoot up with a double haste; and therefore I would have every Husbandman to make much of the rubbish, sweepings, parings, and spitlings of his house and yard, and also of shovellings up of the high wayes, back lanes, and other such places; and especially if they be any thing clayie, or mooriſh, or sandy mixt with any other soyl; for of them he shall find great use, according to the Husbandry and experience already described.

Of Soap-Ashes.

Lastly, There is not any thing that more enricheth Pasture or meadow ground then Soap-ashes, being thinly scattered and spread over the same; and this labour would ever be done at the latter end of *April*, for then Grass is beginning to shoot up, and at that time finding a comfort, the increase will multiply exceedingly.

CHAP. XIV.

How to enrich and make the most barren soyl to bear excellent good Pasture or Meadow.

Two wayes to enrich earth.

TO speak then of the bettering and enriching of these barren earths, and reducing them to good Pasture or Meadow it is to be understood, that there are but two certain wayes to compass and effect the same, namely, water or manure.

You are then, when you go about this profitable labour, to consider the situation of the earth you would convert to Pasture, and to elect for this purpose, the best of this worst earth you can find, and that which lyes lowest, or else that which is so descending, as that the bottom thereof may stretch to the lowest part of the continent, for the lower that such grounds lye, the sooner they are made good, and brought to profit: Next, you shall consider

sider what burthen of grass it bears, and whether the grass be clean and intire of it self (which is the best and likelieſt soyl to be made fruitfull) or else mixt with other worser growths, as Thistle, Heath, Broom, or such like, and if it be burthened with any of these naughty weeds, you shall first destroy them by stubbing them up by the roots, and by burning the upper swarth of the earth with dry straw mixt with the Weeds which you shall cut from the same, then it shall be good for certain nights, both before the first and latter spring, to fold your sheep upon this ground, and that not in a scant manner, but very plentiful, so as the dung of them may cover over all the earth, and their feet trampling upon the ground, may not only beat in the dung, but also beat off all the swarth from the earth, that where the Fold goeth, there little or no grass may be perceived; then whileſt the ground is soft, and thus trampled, you shall sow it all over with Hay-seeds, and then with your flat board beetles, beat the ground smooth and plain, which done, you shall then strow, or thinly cover the ground with the rotten stadds of Hay-stacks, and the moyst bottoms of Hay-barns, and, over that, you shall spread other strong manure, of which, House-dung, or Horse-dung, and mans ordure mixt together is the best, or for want of such, either the manure of Oxen, Kine, or other beasts; and this manure also you shall spread very thin upon the ground, and so let it lye till the Grass come up through the same, which Grass you shall by no means graze or feed with your Cattell, but being come to the perfectness of growth, you shall mow it down; and although it will be the first year but short and very coorse, yet it skilleth not; for the ensuing years shall it yield profit, and bring forth both so good grass, and such plenty thereof as reasonably you can require; for this is but the first making of your ground, and alteration of the nature thereof: neither shall you thus dress your ground every year, but once in twenty or forty years, having plenty of water to relieve it. When therefore you have thus at first onely prepared your ground by destroying the barren growth thereof, and by manuring, sowing, and dressing it, you shall then carefully search about the highest parts of the ground, and the highest parts of all other grounds, any way neighbouring round about

Of watering Grounds.

about it, and somewhat above the level thereof, to see if you can find any Springs in the same (as doubtless you cannot chuse but do, except the ground be of more then strange nature;) and the heads of all such springs as you shall find, you shall by gutters and channels draw into those ditches which shall compass your meadow round about, observing either to bring the water into that part of the meadow ditch which ever lyeth highest, and so let it have a currant passage through the ditches down to the lower part thereof, and so into some Lake, Brook, or other channell, and in this sort you may bring you water a mile or two: Nay, I have seen water brought for this purpose, three or four miles, and the gain thereof hath quit the charge in very plentifull manner.

Helps in the Watering.

But if you cannot find any Spring at all, nor can have the help of any Lake, Brook, River, or other channell of moving water, (which is a doubt too curious, as being cast beyond the Moon) you shall then not onely cast ditches about this your Meadow ground, but also about all other grounds, which shall lye about, and that in such sort, that they all may have no passage but into the upper part of the meadow ditch, so that what rain soever shall fall from the Skie upon those earths, it shall be received into those ditches, and by them conveyed into the meadow ditch: and to augment the store of this water, you shall also in sundry parts of those upper ground which are above the meadow, in places most convenient, dig large Ponds or Pits, which both of themselves may breed, and also receive all such water as shall fall neer about them, and those Ponds or Pits being filled (as in the winter time necessarily they must needs be at every glut of rain) you shall presently by small drains, made for that purpose, let the water out from them into the ditches, and so into the meadow ditch; and so stopping all the drains again, make the Ponds or Pits capable to receive more water.

When and how to water.

When you have thus made your ground rich with water, and that you see it flow (as in the winter time necessarily it must) in plentifull manner through all your ditches, you shall then twice or thrice in the year, or ofner, as you shall then think meet in the most convenientest places of the meadow ditch, stop

ſtop the ſame, and make the water to riſe above his bounds, and to over-flow and cover your meadow ground all over, and if it be a flat level ground, if you let the water thus covering it to lye upon the ſame the ſpace of four or five dayes, or a week, it ſhall not be amiſs; and then you may water it the ſeldomer. But if it lye againſt the ſide of a hill, ſo that the water cannot reſt upon the ſame, then you ſhall waſh it all over, leaving no part unmoyſtened; and this you ſhall do the oftner, according as the water ſhall fall out, and your water grow more or leſs plentifull.

Now for the beſt ſeaſon or time of the year for this watering of meadows, you ſhall underſtand, that from Alhallowtide, which is the beginning of *November* (& at which time all after-growth of meadows are fully eaten, and cattle for the moſt part are taken up into the houſe) untill the end of *April* (at the which time graſs beginneth to ſpring and ariſe from the ground) you may water all your meadows at your pleaſure without danger, if you have water enough at your pleaſure, and may ſpend or ſpare at your will; yet to do in the beſt perfection, and whereby your ground may receive the greateſt benefit; you ſhall underſtand, that the onely time for the watering of your meadows, is, immediately after any great Flux of rain, falling in the Winter, any time before *May*, when the water is moſt muddy, foul, and troubled, for then it carrieth with it a ſoyl or compoſt, which being left upon the ground, wonderfully enricheth it, and makes it fruitfull beyond expectation, as daily is ſeen in thoſe hard Countries, where almoſt no graſs grows but by this induſtry: And here you muſt obſerve, that as you thus water one ground, ſo you may water many, having ever reſpect to begin with the higheſt, and ſo let the water paſs out of one gronnd into another, untill it come to the loweſt, which commonly is ever the moſt flat and level, & there you may let the water remain ſo long as you think good (as was before ſhewed) and then let it out into other waſt ditches or rivers. And here you ſhall know, that this loweſt ground will ever be the moſt fruitfull, as well becauſe it lyeth the warmeſt, moyſteſt, and ſafeſt from ſtorms and tempeſts, and alſo becauſe what ſoyl or other goodneſs this over-flow of water, or the rain waſheth from other grounds, it leaveth

The beſt ſeaſon for watering.

leaveth upon this, and so daily encreaseth the fertility, from whence you shall gather, that at the first making of these meadow grounds, you may bestow less cost of manure and other charges upon this lowest, flat, level ground, than on the higher: and so by that rule also, observe to bestow on the highest ground, and the highest part of the highest ground ever the greatest abundance of manure, and so as you shall descend lower and lower, to lay your manure thinner and thinner, yet not any part utterly unfurnished and void of compost; yet, as before I said, you are to remember, that these meadow grounds need not thus much use of manure (having this benefit of water, and the first years dressing as wash shewed in the beginning of this Chapter) above once in twenty years; nay, it may be, not above once in a mans life time.

And here also is to be considered, that the water which commeth from Clay or Marl grounds, being thick, muddy, and puddly, is much better and richer than that which commeth from sand, gravel, or pibble, and so runneth clear and smooth, for that rather doth wash away and consume the goodness of the ground, than any way add strength thereunto.

CHAP. XV.

Of the inriching and dressing of Barren grounds, for the use of Hemp or Flax.

Grounds ill for Hemp or Flax.

You shall understand, that there are two sorts of grounds, which out of their own natures utterly refuse to bear Hemp or Flax; that is, the rich stiff black Clay, of tough solid and fast mould, whose extreme fertility and fatness giveth such a surcharge to the increase of the seed, that either with the rankness it runneth all into Bun and no rind; or else the seed being tender, and the mould sad and heavy, it burieth it so deep therein, that it can by no means get out of the same: The other is the most vile and extreme barren ground, which by reason of the climate wherein it lyes, is so exceeding sterile and unfruitfull, that it will neither bear these seeds, nor any other good seed. And of these two soyls only I purpose in this place to treat; for which, such soyls as will naturally and commodiously bear these seeds, I have nothing to do, in that I have sufficiently

ficiently written of them in mine *English Husbandman* and *English Housewife*, which are books onely for good grounds, but this for all such grounds as are utterly held without cure.

To begin then with the stiff black Clay, which albeit it be very rich for Corn, is most poor for these seeds, when you would reduce and bring it to bear Hemp or Flax, which neer unto the Sea-coast is of greater price and commodity than Corn any way can be, especially adjoyning unto any place of fishing, in respect of Nets and other Engines which is to be made of the same, and which being daily wasted and consumed, must likewise be daily repleni shed; you must first with a strong plough, fit for the nature of such land, plow up so much ground as you intend to sow Hemp or Flax upon, about the midst of *May*, if the weather be seasonable, and the ground not too hard: if otherwise, you must stay till a shower do fall, and that the earth be moistned, then shall you hack it and break the clots in small pieces; then with the salt Sea-sand, you shall sand it very plentifully, but if that be not to be gotten, and that you be very well assured of the natural richness of the earth, you shall then sand it with the best Red sand you can get or find neer unto you, and upon every Acre of ground you thus sand with fresh sand, you shall sow three bushels of Bay-salt, and then plow up again the earth, sand and salt together, which would be done about the latter end of the year, as after *Michaelmas*, and so let the ground rest till seed-time, at which time you shall first before you plough it, go down to the low rocks on which the Sea-beats, and from thence with drags and other Engines, gather those broad leaved black weeds, which are called Orewood, and grow in great tufts, and abundance about the shore; and these weeds you shall bring to your Hemp-land, and cover it all over with the same, and then you shall plow it again, burying the weeds within the earth.

Black Clay for Hemp, &c.

And herein is to be observed, that in any wise you must lay these weeds as wet upon the Land as when you bring them out of the Sea, provided still, that you add no other wet unto them but the salt-water, for so they are of all soyls and manures whatsoever the only best and fruitfullest, and most especial for these seeds, and breed an increase beyond expectation.

When you have thus plowed over the ground, you ſhall then hack it again, and then ſow it with either Hemp or Flax-ſeed, which you pleaſe, and after it is ſown, you ſhall then harrow it (and not before) and you ſhall be carefull to harrow it into as fine mould as you can, and this mould is likely to run fine enough, as well by reaſon of the fertility, as alſo of the mixture; yet what clots you cannot break with your Harrows, thoſe you ſhall break with your clotting-beetle, and ſuch like tools; then after the firſt great ſhowr which ſhall fall after your ſowing, you ſhall run over your land thus ſown with your back Harrows, that is, with a pair of large Harrows, the wrong ſide turned upward, to wit, the teeth turned from the earth, and the back towards the earth; and if need be, you ſhall lay upon the Harrows ſome indifferent heavy piece of wood, which may keep the back of the Harrows cloſer to the ground, and ſo go over all the earth, and lay it as ſmooth and light as is poſſible, without leaving the ſmalleſt clot that may be unbroken. Now if the ground be ſown with Hemp, you ſhall not think of weeding it at all, becauſe Hemp is ſo ſwift a grower, and ſuch a poyſon unto all weeds, that it over-runneth, choaketh, and deſtroyeth them; but if it be ſown with Flax or Line, which is a much tenderer ſeed, and bringeth forth more tender leaves and branches, then you ſhall watch what weeds you ſee ſpring up, and in their firſt growth pluck them up and caſt them away, till you behold your Flax or Line to be grown above the weeds, and then you may let it alone alſo, for after it hath once gotten height, it will not be over-grown with weeds.

Making of ill earth bear, &c.

Now touching the other ſoyl, which through the extreme barrenneſs thereof, refuſing to bring forth any good fruit at all; you ſhall in all points dreſs it, as you dreſs your plain clayes, deſcribed in the ſecond Chapter of this Book, beginning at the ſame time of the year that is then appointed, or (if more neceſſary occaſions hold you) if you begin later, it ſhall not be amiſs, and then at *Michaelmas* you ſhall plow it over the ſecond time, and manure it with ſea-weeds, and ſo let it lye at reſt till *March* (which is ſeed time) and then plow it again, and manure it with ſea-weeds again, and after the plowing, you ſhall hack

hack it, and if in the hacking you find the earth ſtiff and tough, then you ſhall harrow it before you ſow it, and harrow it again, breaking the earth ſo ſmall, and laying it ſo ſmooth as poſſible you can, uſing the help both of the clotting beetles, and all other tools which may be available for breaking the earth and making the mould as fine as any aſhes, then after the firſt great ſhowr of rain, perceiving the ground to be well moiſtned, you ſhall inſtead of the back Harrows (which upon this earth may be too light) take the great rowler which is deſcribed in the book of the *Engliſh Husbandman*, being a great round piece of timber of many ſquares, drawn either by Horſe or Oxen, but a ſingle Horſe is beſt, both in reſpect of much treading the ground, as alſo for the ſwift going away or drawing of the ſame: for the ſwifter it is drawn, the better it breaketh the ground, and the lighter it leaveth the mould: and with this rouler, you ſhall run over and ſmooth your ground very well, leaving no clot unbroken, and ſo let it reſt.

As for the weeding of this ground, you ſhall not reſpect it at all, for naturally it will put up no weed, the very ground of it ſelf being a very great enemy thereunto, nor ſhall you need to dreſs this ground in the form before ſaid, but once in eight or ten years: only every ſeed time, when you plow it (as you ſhall not need to plow it at any time, but ſeed time only) you ſhall before the plowing, cover or manure the Land with the ſea-weed before ſpoken of, which will give ſtrength enough to the ground, without any other aſſiſtance. Weeding.

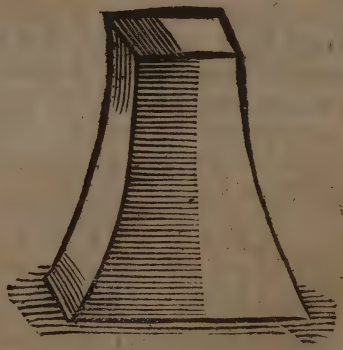
CHAP. XVI.

The manner of ſtacking of all Kind of grain or pulſe with greateſt ſafety, and leaſt loſs.

IN theſe barren and hard Countries, of which I have formerly written all ſorts of buildings are exceeding coſtly and ſcarce, both in reſpect of the clime, which is commonly moſt extreme cold, mountainous, and much ſubject to ſtorm and tempeſt, as alſo through the great want of Wood and Timber, which in thoſe hard ſoyls doth hardly or never proſper, and therefore in ſuch places buildings muſt be both ſmall and dear, ſo that it will be very hard for the Husbandman to have houſe-room for

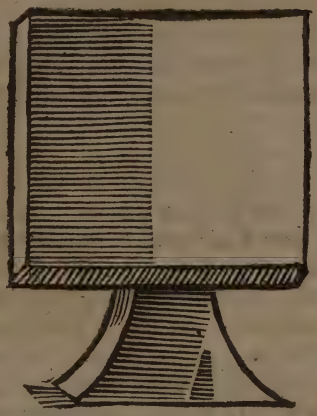
all his corn; but that of neceſſity he muſt be inforced to ſtack much, or the moſt part of his Corn without doores, which albeit it be a thing very uſuall in this Kingdome, yet is it in many places ſo inſufficiently done, that the loſs which redounds thereby (partly by the moyſture of the ground, which commonly doth rot and ſpoyl at leaſt a yard thickneſs of the bottom of the Stack next the ground, and partly through Mice, Rats, and other Vermine, which breeding in the Stack, do eat and devour a great part thereof; as alſo through many ſuch like negligent cauſes) is greater than a good Husband may with his credit be guilty of, or a profitable Husband will by any means ſuffer to be loſt ſo negligent.

To ſhew then the manner how to ſtack or mow your Corn without doores, in ſuch ſort, as neither the ground ſhall rot it, nor theſe vermines deſtroy it, nor any other loſs come to it by way of ill Husbandry, you ſhall firſt cauſe four pieces of timber, or four ſtones, to be hewed broad and round at the nether end; like the faſhion of a Sugar-loaf, or this figure.

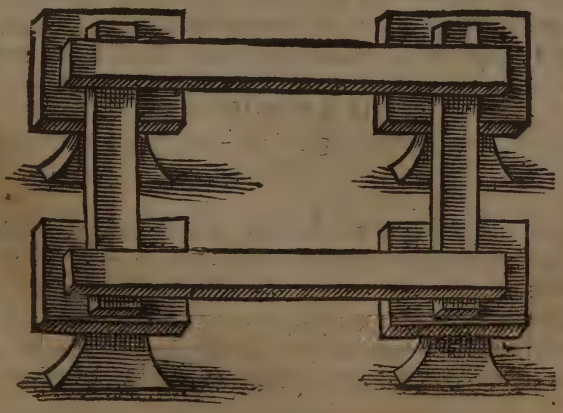


And theſe pieces of wood or ſtone ſhall be in length three-foot or thereabout, and in compaſs for breadth at the bottom, two foot, or a foot and a half, and at the top not above one foot: theſe four pieces of wood or ſtone you ſhall place in your ſtack-yard, or other convenient place neer your thraſhing-floor,

floor, and you shall place them four square, of an equal distance one from another: then you shall cut out four smooth boards of two inches and a half thick at the least, and full three foot square every way, and these boards you shall lay upon the heads or narrow tops of these stones or pieces of timber according to this Figure.



Then shall you take strong over-layers of wood, and lay them four square from one board to another, according to this Figure.



And

And then upon theſe over-layers you ſhall lay other ſmaller poles cloſe one by another, and then upon them you ſhall mow or ſtack your Corn, whether it be Wheat, Barley, Oats, Peaſe, or any other kind of grain, and be ſure if you make your ſtack handſome and upright, which conſiſteth in the Art and Workmanſhip of the Workman, you ſhall never receive loſs in your Corn: for the raiſing of it thus two or three foot from the ground, will preſerve it from all moiſture or hurt thereof, and the broad boards which cover the four ground-poſts will not ſuffer any Mice or other vermine to aſcend or come into the ſame.

Now for the manner of laying your Corn into the Stack, you ſhall be ſure to turn the part of the ſheaf where the eares of the Corn lye ever inward into the Stack, and the other which is the ſtraw end, you ſhall ever turn outward, and by that means you ſhall be aſſured that no flying Foul, as Pigeons, Crows, and ſuch like, can do you any hurt or annoyance upon the ſame: Laſtly, you ſhall underſtand, that you may make theſe Stacks either round, ſquare, or long-wiſe, yet round is the ſafeſt, and if you do make them long-wiſe, then you ſhall ſet them upon ſix ground-poſts, or eight, according to the length and proportion you would have it, and after your Stack is made, you ſhall then thatch it very well to keep out the wet; alſo if when you do Stack your Wheat, you do top your Stack with Oats or other coorſe grain, it will be ſo much the better, and the Wheat will lye in greater ſafety: for no part of a Stack well made, eſpecially a round Stack, will ſo ſoon take wet or hurt, as the top thereof.

CHAP. XVII.

The diſeaſes and imperfections which happen to all manner of Grain.

ALbeit the manner of Staking and laying up of Corn or Grain in the form before ſhewed, may to every one give an aſſurance for the ſafe and profitable keeping thereof as long as it indureth therein, and abideth in the eare, yet becauſe divers neceſſities may compell the Husbandman to thraſh out his Corn, as either, for preſent uſe of Straw, Chaff, Garbage, or other

other commodities needfull unto him (as the ſeaſon of the year ſhall fall out) I think it moſt neceſſary in this place, to ſhew how all manner of Grain and Pulſe, of what nature ſoever, may moſt ſafely and profitably be kept from all manner of annoyances, or corruptions whatſoever, being a work of that utility and goodneſs, that not any belonging to the Husbandman doth exceed it: Nor ſhall it be ſufficient to ſhew the offences and diſeaſes of Grain with their cures and healthfull preſervations, whilſt it is in the Husbandmans poſſeſſion, but alſo whilſt it is in the earth, and at the mercy of cold, heat, moyſtneſs, or dryneſs, and not onely ſubject to the malignant influences of Stars and Planets, with the increaſing and decreaſing of the Moon and her operations: but alſo of divers other hurtfull Vermine; as birds, worms, piſmires, dorrs, ſnails, moals, and other ſuch like: ſome whereof conſume and devour the grain ere it ſprout, other ſprouting when the kernel is rotten, and turned to ſweet ſubſtance, and others after it is ſprouted, by devouing the firſt tender leaves, before they have any ſtrength to appear above earth, being as it were but ſoft white threads not changed into the ſtrength of green, becauſe the air and Sun hath not yet lookt upon it.

Crows, Pidgeons, and Birds.

To begin then with the firſt enemies of corn or grain, after it is thrown into the earth, there is none more noyſome then *Crows*, and *Choughes*, and other ſmaller birds, which flocking after the ſeeds man will in a manner devour and gather up the grain as faſt as it is ſown: for as according to the old ſaying, That *many hands make light work*, ſo many of their mouths (being creatures that ever flye in flocks together) and their much nimbleneſs in devouring, ſoon rob the earth of her ſtore, and deprive the labouring Husbandman of very much profit, and the Grain which the creatures do moſt conſume, is all manner of white Corn, as Wheat of all kinds, Rye and Oats, as alſo Hemp-ſeed, Lin-ſeed, Rape-ſeed, and ſuch like: Neither are they only offenſive during this time of ſowing, but after it is ſown and covered, digging it with their ſtrong bills out of the earth, and ſo making the waſte greater and greater.

The Cure.

The prevention or cure of this evill, is divers, as the affections of people, and cuſtom of Countries do inſtruct them: for ſome

ſome (eſpecially the *French-men*) uſe when they ſow theſe grains and ſeeds, firſt to ſprinkle it with the dregs or lees of their bittereſt oyles, which when theſe devouring fowls do taſte, they refuſe to do any further hurt: Others uſe to ſow Pigeons dung or Lime with their ſeed, which ſticking unto the grain, the unſavorineſs thereof will make the fowl caſt up the grain again, and leave to do further hurt. But foraſmuch as theſe medicines cannot ever be had, nor are ever wholſome for every ground, the onely beſt and ſafeſt means to prevent this evill, is, to have ever ſome young boy, with bow and arrows to follow the ſeed-man and Harrows, making a great noiſe and acclamation, and ſhooting his arrows where he ſhall ſee theſe devourers leight, not ceaſing, but chaſing them from the Land, and not ſuffering them at any time to leight upon the ſame, and theſe ſervants are called Field-keepers, or Crow-keepers, being of no leſs uſe and profit (for the time) then any other ſervants whatſoever. Nor is it ſufficient to have the Field-keepers for the bare time of ſeed only, whileſt the grain is in ſowing, but he ſhall alſo maintain them untill ſuch time as you ſee the grain appear above the earth, which for Wheat or Rye, becauſe they are winter ſeeds, and ſo longer in ſprouting, will ask a full month; for all other ſeeds which are ſown in the Spring, or Summer, a fortnight is full ſufficient: And this Field-keeper ſhall not fail to be in the field an hour before Sun in the morning, and ſo continue till half an hour after Sun-ſet in the evening, for at the riſing and ſetting of the Sun is ever done the greateſt miſchief, for then are all creatures moſt eager and hungry; and though the indurance may promiſe much pain and trouble, yet queſtionleſs the labour to any free ſpirit, is both eaſie, and pleaſant.

Additions. Alſo if your Field-kepeer, inſtead of his bow and arrows, do uſe to ſhoot off a musket, or Harquebuſh, the report thereof will appear more terrible to theſe enemies of Corn, and the profit thereof will be a great deal more: for a ſhot or two of powder will ſave more Corn, than a weeks whooping and ſhouting, onely you muſt obſerve, that your Field-keeper uſe no bullet or hail-ſhot, for ſo he may turn ſcaring to killing. Now touching the deſtruction which theſe creatures make of Corn after it is

is ſtackt up by tearing off the thatch, and digging holes and pits therein; to prevent that, you ſhall cauſe the thatcher to ſcatter upon the thatch, great ſtore of aſhes of any kind, or elſe Lime, that as the Pidgeons or Crows tear up the ſtraw, the Lime or aſhes will ſparkle into their eyes and nares, which they will not indure; as for thoſe parts of the ſtack which cannot be thatcht, as the ſides and ends; upon them you ſhall prick divers ſcare-crows, as dead Crows, or dead Pidgeons, or any other rags, as the ſhape of a man, made either of thumb ropes of hay or ſtraw, or elſe ſome old caſt away apparrel, ſtopt with ſtraw, and ſo fixed on the ſtack, alſo in this caſe you may uſe Clap mils, or ſuch like toyes, which make a great noiſe. But to conclude, the beſt prevention for theſe creatures (if you want ability to maintain a field-keeper) is to take long lines of pack-thread, and in them to knit divers feathers of divers colours, eſpecially white ones, and with little ſtakes ſo faſten them over the Corn, that with every breath of wind the feathers may dance and turn about, and the nearer that theſe blinks or ſcares come to the ground (when the corn is new ſown) ſo much the better it is, leaſt the fowl, finding a way to creep under them, begin not to reſpect them; ſo that a hand or two from the ground is ſufficient, Provided that the feathers and ſcares have liberty to play and move.

But if it be to ſave Corn in ripening, that is to ſay, a little before it be reapt, when the ears begin to harden, or when it lyeth in ſingle ſheaf upon the land, for then fowl and birds do as great miſchief, as at any other ſeaſon, it ſhall then be fit that you raiſe theſe lines or ſcares upon higher ſtakes, ſo as they may play as much above the ears of the corn, as before they did above the earth; and amongſt theſe ſcares thus made upon lines in ſundry parts of the field, you ſhall upon other ſtakes place many other bigger ſcares, as dead Crows, Pies, Gleads, Pigeons, or ſuch like, as alſo the proportion of a man formerly ſhewed you, or any rags of cloath being black, fowl, and ugly, like bakers malkins; and than this, there is no ſafer way for the defence of grain, or corn, from theſe birds, and ſuch like.

The next great devourers or conſumers of grain are Piſmires or Ants, which although it be but a little creature, yet it is ſo labourſome, that the grain which they carry away or deſtroy by eating, amounteth to a great quantity, and the miſchief which Of Piſmires.

these little vermine do, after the Corn is covered in the ground, and before it sprout, for they creeping in at the little chinkes of the earth, and finding the Corn, either drag it out, or eat it, so that it cannot grow, and the grain which they most hurt, is all manner of white corn, especially your finest and smallest Wheat, for the skin or hull is thinnest, and the kernel whitest and sweetest: also to barley they do much hurt, especially that which is fullest and best; likewise to Rye, Hemp-seed, Lin-seed, and Rape-seed; as for Oats, because it is double hull'd, and also your great whole straw wheat, and polard wheat, which is thick hull'd, their hurt is not so much to them, and unto pulse nothing at all, because they are too heavy, too thick skinned, and too bitter in taste.

The cure. The best cure and prevention for these Pismires, is, to search your corn fields well, especially under hedges and old trees, and on the top of Mole-hills, and if you find any beds or hills of ants or Pismires, presently after sun-setting, with hot scalding water to drown the beds or hills, or with wet straw and fire, to make such a smoak upon them, as may smother them to death: also if you manure your corn-lands with ashes, lime, or salt-sand, you shall be well assured it will never breed Pismires.

Of Dores. Next unto these, your Dores or great black Clocks are vehement destroyers of all kind of Corn, both white corn and Pulse, whilst it lyeth dry on the earth, and before it sprout; for after it beginneth to sprout, they do no more touch it, and these Dores destroy it in the same manner, as the Pismires do, by creeping in at the small crevices of the earth, and finding the grain, do as long as is is dry feed thereon, and though they are no hoarders, or gatherers together of the grain, keeping it in heaps in dry places, as the Pismires and other vermine do, yet they are great feeders thereon, and that continually: besides, they will ever chuse out the fullest and best corn, and leave the leaner, whereby they do the Husbandman double injury, as first to devour, and then to devour but the best only.

The cure. The cure or prevention for these Dores, or black Clocks, is in seed-time to make great smoaks in your Corn-fields, which will presently chase them from thence, for they are the greatest enemies that may be to all manner of smoak: but if that be not sufficient,

ſufficient, then immediately before you ſow your Corn, you ſhall very lightly ſow your Land with ſharp Lime, and whenſoever the Dore ſhall find or taſte the ſmell or taſte thereof, preſently he will depart; or if he eateth of the grain that toucheth the Lime, it is as preſent Poyſon unto him, and there he dyeth.

Of field Rats and Mice.

After theſe, your field Rats and Mice are very vehement deſtroyers of all manner of grain or Seeds before they ſprout, eſpecially all ſorts of wheat, and all ſorts of pulſe, becauſe for the moſt part thoſe kind of grains in many ſoyls are ſown under furrows and not harrowed, ſo that the furrows at firſt lying a little hollow, theſe Vermines getting in between the earth and them, will not only devour and eat a great part of the grain, but alſo gather together great heaps thereof into their neſts, as is often ſeen when at any time their neſts are found, ſome having more, ſome leſs, according to their labours.

And albeit in other ſoyls where the grain is ſown above furrow, and ſo harrowed in, and laid much more cloſe and ſafe, they cannot do ſo much hurt as in the former, yet even with theſe they will with their feet digg out the Corn in great abundance, and though in leſs meaſure, yet do hurt that is unſufferable; ſo that to conclude, neither Rye, Barley, Oats, nor any other ſmaller and more tenderer ſeeds, are free from their annoyance and deſtruction.

The cure.

Now the cure and prevention for theſe Field Rats, or Mice, are divers, according to the opinions of divers Authors, and divers of our beſt experienced Husbandmen: for ſome uſe in the Dog-dayes, or Canicular dayes, when the Fields are commonly bare, to ſearch out the holes and neſts of theſe Rats and Mice, which are eaſily known, being little rounds holes in the earth, made ſo round and artificially as if they were made with an *Auger*, no bigger then the body of the creature that was to lye in it, and into theſe holes they uſe to put a few *Hemlock-ſeeds*, of which when the beaſts taſtes it is preſent death unto them: Others uſe to ſprinkle upon the land *Hellebor*, or neeſing powder mixt with Barley-meal, of which the Mice and Rats will greedily feed, and it is a deadly bane and preſent death unto them.

Laſtly (and which is the beſt medicine) if you take a good quantity of ordinary green glaſs, beaten alſo to powder, and as much

Copperas or Vitriol beaten also to powder, and mix them with coorse honey, till it come to a paste, and then lay it in the holes, and most suspicious places, and it will neither leave Rat nor Mouse about all your fields, but suddainly destroy them.

Of Worms. The next great destroyers of Corn and Grain, are *Worms*, and they destroy it in the sprouting, then when the ground hath rotted it, and the white or milk substance breaking open the upper husk, shooteth forth in little white threads at both ends, upon which whilst it is so moist and tender, the worm feedeth extreme, and so devouring up the substance or sperm, is the cause the corn cannot grow or get out of the ground, and these *worms* being as it were the main citizens within the earth, are so innumerable, that the loss which is bred by them is infinite.

The cure. Now the cure or prevention for these Worms, is diversly taken: for some Husbandmen use but onely to strike into the Plow-Rest, and under the lowest edge of the shebord certain crooked spikes of iron of great nailes half driven in, and turned back again, with which as the Plow runs tearing in the ground, and turns up the furrow, those pieces of Iron kill and tear in pieces such Worms as are either within or under the furrow that the Plow casts up, and this is sure a very good Husbandly Practice, but not sufficient for the destroying of such a secret hurtfull vermine which is so innumerable, and lyes so much concealed; therefore, more curious Husbands use besides this help of the Plow, to take Ox-dung and mix it with straw, and then to burn it up in the land making a great smoak over all the land, immediately before you plow it for seed, and it is thought that this will kill all the worms which lye so high in the earth, as to hurt the Corn.

Others use, before they make either the mixture or the smoak, to wet the straw in strong lye, and then adding it to the dung, the smoak will be so much the stronger, and the worms kill'd the sooner; or if you sprinkle strong Lye upon your seed before you sow it, there is not any worm that will touch the grain after: Also, if you take hemp and boyl it in water, and with the water sprinkle your seed before you sow it, not any worm will come neer to touch it.

Of Rye not to be wet. Yet it is to be observed in this rule of wetting your seed-corn, that

that by no means you must wet your seed Rye, for it is a Grain so warm and tender that it will neither indure cold, wet, nor stiff ground, insomuch that the Plow-man hath a Proverb, that Rye well drown'd in the Hopper; that is to say, it must neither be sown on wet ground, nor in a wet day, since present showres are apt to destroy.

Lastly, it is thought that oft plowing your ground in the wane of the Moon is a very good means to destroy both.

Touching that practice which many use, to gather the worms from their lands at Sun-rise, in bright dewie morning, and Sun-set, when the worms couple above the earth, I hold it more fit for small Gardens, then large Corn-fields.

Of Snails. The next great destroyers of Corn, are Snailes, and they destroy it after it is sprouted, feeding upon the tender white threads and fibres which start from the seed and would rise above the earth being the stem or stalk on which the eares should grow (were it not devoured and eaten up by the Snails, and such like Vermine) as soon as it begins to peep up, or as it were to open the earth; whereby it is driven back and forced to dye in the earth: for these creatures sucking up the tender sweetness, deprive it both of life and nourishment.

The Cure. The cure and prevention for this evill, is to take the soot of a Chimney, and after your Corn hath been sown a week or ten dayes, or within two or three dayes after the first showr of Rain which shall fall after the Corn is sown; you shall sow this soot of the Chimney thinly over the Land, and not a Snail will indure to come thereon: Others use (especially in *France* and those more fertile Countries) to take common oyl-lees, and after the Corn hath been sown, and is ready to appear above the ground, to sprinkle it all over the lands, by which means no Snail or such like Creature will indure to come neer the same.

Of Grashoppers. The next great destroyer of Corn is accounted the Grashopper, and he also destroyeth it after it is sprouted, and appeareth above ground, as the Snail doth, but somewhat more greedily, for he not only feedeth on the tender white strings, but upon the first green leaves that appear also; by which meanes the Corn is not able to spring or bring forth a stem or stalk to bear

the

the ear upon, or if it do put forth any, yet it is so small, weak and wretched, that the ear growing on the same, is withered and lean, and the grain dry and blasted, and no better than chaff; nor is there any corn that scapeth the destruction of the Grashopper, for he generally feedeth on all: first on Wheat and Rye, because they are the earliest, then on the Barly and Oats, and lastly on pulse, upon whose leaf, and blossom he feedeth, whilst the first is sweet and pleasant, or the other green.

The cure. Now the cure or prevention for these creatures, is, according to the opinion of some Husbandmen, to take Worm-wood, and boyl it well in water, till the strength of the Worm-wood be gone thereinto, and then with that water, in the month of *May*, to sprinkle all your Corn over when the Sun is rising or setting: and not any Grashopper will come neer, or annoy the same. Others use instead of Worm-wood to boyl Centaury, and to use the water thereof in the same manner as aforesaid, and find an equal and right profit in the same: but it is most certain that any bitter concoction whatsoever, used and applyed as aforesaid, will not leave any Grashopper about your field; for any bitterness is such an enemy unto them, that they cannot live where they feel any taste thereof.

Of Moles. The last offence of living creatures belonging to corn or grain are Moles, which not only feed upon it after it is sprouted, and spindled, by eating up the roots thereof, and so consequently by killing the whole corn: but also by their digging and undermining of the earth, do root up the corn and destroy it in most wonderfull manner, for where they make their haunts, or are suffered to digg, there they will destroy almost half an acre in a day: neither make they choice either of grounds or grain, for all grounds and grains are alike if the ground be not too wet or subject to inundations, or over-flowes (as for the most part corn grounds are not) for above all things Moles cannot indure wet ground, or earth of too moist a quality.

The cure. Now the best cure or prevention against these creatures, is, to find out the trenches and passages, which are most plain and easie to be known by the turning up of the new earth, and digging cross holes in the same, to watch either the going forth, or the comming back of the Mole, and when you see her cast, to strike her

her with an iron fork made of many grains, as eight or ſix at the leaſt, and ſo to kill and derſtoy them, which is ſo generally known amongſt Husbandmen, that it is become a trade and occupation among them, ſo that it needs no farther deſcription; and the rather, in as much as for three or four pence a ſcore, you may have any ground cleanſed of Moles whatſoever.

Now there be ſome others which have not this art of killing or catching of Moles, which only do take brimſtone and wet ſtinking ſtraw, or any thing elſe that will make a ſtinking ſmoak, and putting fire thereto, ſmoak all the places of their haunts, and by that means drive them all clean away from the corn lands: many other practiſes they have, but none ſo good, certain, and probable as theſe already declared.

Thus far I have ſpoken of thoſe offences which proceed from living creatures, I will not intreat of thoſe which come and grow from the influence of the Heavens, being malignant vapours, which ſtriking into the earth, do alter the ſweet and pleaſant nouriſhment thereof, and change it into bitterneſs and rottenneſs, whereby the corn is either ſlain out-right, withered and made lean and unkindly, or elſe the kernel turns to a filthy blackneſs, being bitter, dry and duſty, like unto ſmoak, which the Husbandmen call ſmuttineſs, or mildew. It commeth alſo another way, as namely, by over-rankneſs, or too much fatneſs of the earth, and this hapneth moſt commonly onely to Wheat, for if blackneſs happen to any other grain, it commeth of blaſtings, or other malice of the Stars, for rankneſs of the ground is in Barley, Rye, or Oat onely, make them lye flat to the ground, the ſtalk not being able to ſupport the multiplicity of the ears, and ſo by that means the grain wanting his true nouriſhment, grows withered, and of no validity; now that this is moſt eaſie to be found out, the rankneſs of the growing corn riſing as it were in cloſe bundles together, and the deep blackneſs of the green blade will with ſmall travel ſhew you.

Offences from the influence of the Heaven.

Of Smuttineſs and Mildew.

This to cure and prevent, it ſhall be good before you ſow your Grain, to ſow your land lightly over with chalk, for that will abate his over-rankneſs.

The Cure.

There be other malignant qualities which proceed from the influences of the Heavens, or rather from the qualities of the Planets.

Additions.

Planets or Elements, which do many dangerous hurts unto Corn, as namely the Hail, the Lightning, the Thunder, or the Planet-ſtruck, or Blaſting, for all which the antient Husbandmen have ſuggeſted ſeveral Cures: As namely for the Hail, to plant the White-vine, or ſtick the branches thereof in the Corn-field: for the Lightning, to cloſe a Hedge-Toad in an earthen Pot, and burying her in the Corn-field, or to plant or hang up the feathers of an Eagle, or a Seal skin, or to ſet Lawrel therein; for the Thunder, to Ring Bells, to ſhoot off great Ordinance, or to burn ſtinking weeds in the Corn-field: And for Blaſting, to take the fair horn of an Ox, and mixing it with dung, to burn it in the Corn-field, or to take the branches of the Bay-tree, and to plant them in the Corn-field: But, in as much as all theſe, and many other the like, ſmell rather of Conjuration, Charm, or Exorciſm, then of any probability of truth; I will neither here ſtand much upon them, nor perſwade any man to give further credit unto them, than as to the vapours of mens brains, which do produce much, many times out of meer imagination; and ſo I will proceed unto thoſe things which are of far greater likelyhood.

Of Froſts. The next evill which hapneth unto Corn or Grain, is that which commeth by froſts and ſharp nipping colds, which ſtarving the root, and binding up all nouriſhment, maketh the Corn dry, wither, and never proſper; and, than the violence of the froſts, there is nothing more bitter to plants and ſeeds, For, even Raiſor like, it cutteth the veins and ſinews in pieces, and as ſharp needles pricketh the heart of every growing thing: For as the fire which is moſt hot, when it rageth, burneth, and conſumeth all things; ſo the froſt, which is moſt cold when it continueth, ſtarveth and choaketh, or ſtifleth whatſoever it embraceth.

The Cure. Now the cure or prevention for thoſe evills which do happen to grain by theſe great froſts, is as ſome Husbandmen ſuppoſe, to cover the Land over when it is ſown with aſhes: others ſpread ſtraw or rotten litter upon their Corn, and not any of them but is ſufficient to prevent the worſt injury that froſt can do.

Miſts and Foggs. The moſt malignant quality which offendeth grain, is miſt and

and fog: which being naughty vapours drawn from the infected parts of the Earth, and fall upon the Corn, do not onely make the grain leprous, but also infecting the better earth after the kindly nourishment thereof, and as it were distilling corruption in the veins, makes all that depends thereupon most leprous and unwholsome, and thereby altereth the quality, quite turning sweetness into bitterness, fulness into emptiness, and goodness into badness, to the great loss of the Husbandmen, and the much disreputation of the ground.

Now the cure and prevention of this evill, according to the opinions of all the best Husbandmen, is, to take weeds green, the twigs of bramble, and other brush wood, wet straw, or such like stuff, and binding them up in great bundles, to put fire thereto, making a great and violent smoak, and then taking the advantage of the wind, to walk up and down the field and smoak it, which is thought a certain remedy to take away those inconveniencies which happen by the venome and poyson of these mists and foggs. The Cure.

Now to conclude, of the diseases and infirmities which happen to corn whilst it is in the field, there is not any formerly spoken of more dangerons, or of vilder quality then the reaping, mowing, or gathering in of Corn, wet, or too green, and unhardned: for such moisture, when the corn is sheaved up close together, or stackt or mowed up, forthwith gathereth heat, and either setteth the Corn on fire, or else the moisture being of less quantity, and not apt to flame, yet it corrupteth the grain and straw, & breedeth a stinking mouldiness or rottenness about it: so that the grain either becomes dung or dirt, or at least so stinking and unsavory, that it is good for no use or purpose, as is daily seen where careless Husbands gather in their grain without respect or government, making the old proverb good, That haste ever brings waste. Corn reapt wet.

The cure and prevention of this evill, is the well-husbanding and managing of the harvest, as first with a carefull and well judging eye to look upon your corn, and to know by the hanging downward of the eare, looking as it were back to the ground, and by the hardness of the grain, whether it be ripe or no; then to look into the cleanness of the corn, as whether it The cure.

be full of greenneſs, as graſs, weeds, and ſuch like: or clean of it ſelf without any mixture: if you find there be any weeds mixt with it, then you may reap it ſo much the ſooner, though the kernell be not ſo well hardned as you would wiſh: and above all things have a care never to ſhear corn in the rain or wet, no, not ſo much as with the mornings or evenings dew upon it, but even in the heat and brightneſs of the day. Then having reapt your corn ſo full of graſs and weeds, you ſhall by no means ſheaf it, but ſpreading it thinn in the Sun let the graſs wither all that day, which when you perceive to change colour and grow dry, then bind it up in ſheafes, and let it lye ſingle a day, that the wind and Sun may get into it, and dry the greens more ſufficiently; then lay it in ſhocks of ſix or eight ſheafes a piece, and in thoſe ſhocks, turn the eares ſo inward, that the other bigger ends may defend them from all the rain, wet or dew that may befall upon them: then a day or two after, lay them in ſhocks of twenty, or of four and twenty ſheafes a piece, and in thoſe ſhocks, let them take a ſweat; then break them open in a bright Sun-ſhine day, and, letting the air paſs thorow them, to dry them, forthwith lead the grain home, and houſe it or ſtack it in ſuch ſort as was ſhewed in the former Chapter, and be ſure the grain thus ordered and dryed can never take hurt: but if the ſeaſon of the year fall out ſo extraordinary evill and full of wet, that by no means you can get your Corn dry home, (which although it be ſeldome ſeen, yet is is poſſible to be ſeen) in this caſe you muſt bring it home as well as you can, and having your Kilne well ordered and bedded, you ſhall lay as many ſheafes thereon, as it can contain, and turning and toſſing them over a very gentle fire, by ſlow degrees dry them very perfectly as near as you can, with no greater a heat than that which the Sun giveth, and then mow and ſtack them up at your pleaſure, for the ayre will ſweeten them again, and take away all ſmell of ſmoak or other annoyance; only obſerve, not to ſtack them up whilſt the fire or heat is in them, but when they are cold, and ſo they will be as ſweet as may be.

Of Corn waſht. Now it is not amiſs that I ſpeak here a word or two of waſht-

washt corn, or the washing of corn: True it is (as before I have written) that all sorts of wheat whatsoever, are subject either by the rankness of the ground, blasting or else mildewing, to a kind of filthy sooty blackness, as is already shewed; and this sooty corn is taken two wayes, generally and particularly: generally, if the whole land be stricken, and no corn saved, but all spoyled, which is called mildewed; or particularly, where but some certain eares are struck, or some certain part of the grain, as when it is black at both ends, yet full and sound in the middest, and this is called smutcht corn, being disfigured in part, but not in all. This smutcht corn, which is strucken here and there, if the blasted eares be not culled out from the other, (which to do is an Husbandry exceeding good and very worthy) when it commeth under the flayl, the dust of those black blasted eares will so foul all the rest of the corn, that it will look black and ill-favoured, and so become unserviceable and unmarketable; for the blasted corn is both bitter and unwholsome: In this case, you must of force wash this corn, and you must do it in two or three waters, till you see all the blackness quite gone; which done, then drain away your water clean, and laying the corn on fair window cloaths, or coverlids, lay it in the heat of the Sun, and so dry it again till it be so hard that it will grind: But if the time of the year will not serve for the Suns drying it, then you shall dry it on a Kiln, with a very soft and gentle fire, and then cool it in the air to recover the sweetness again, and then the corn is as serviceable as any other: only for seed it will by no means serve, both by means of the blasting, which makes the kernell imperfect at both ends where it should sprout, as also the too much drying thereof; by which it is so much hardned, that the ground hath no strength to resolve it; therefore it is the Office of every Husbandman when he chuseth his seed corn, to eschew by all means this washt corn as a grain that is lost in the earth, and will by no means grow.

Therefore that you may know washt corn from all other corn, and so not to be cozened by any deceit in the ill Husbandman, you shall take it up in your hand, and if the corn To know washt corn.

look bright, cleer, and shining, being all of one intire colour, without change or difference, then be sure the corn is unwasht and perfect.

But if you find it look whiter at the ends then in any other part of the corn, and that the whiteness is black and not shining, so that there is a changeable colour in the corn; then be assured that the corn is washt, and then by no means apt for seed or increase.

Again, put three or four grains into your mouth, and chew them, and if then the taste be sweet and pleasant, and grind mellow and gently between your teeth, then is the corn not washt; but if it have a bitterish, or fleshy raw taste, and grind hard between your teeth, or with much roughness, then hath the corn been washt, and dryed again, and is not good for seed; also when corn is more then ordinarily moist, or more then ordinarily dry, both are very ill signs, and shew either imperfect corn, or imperfect keeping, for the best and good corn indeed, ever holdeth an indifferent temperature, betwixt dryness and moisture.

CHAP. XVIII.

How to keep all manner of grain, either thrasht or unthrasht with least loss the longest time, and how to preserve it from all infirmities, and vermine in the House or Garner.

Keeping of Corn two-fold.

TO proceed to the keeping and preserving of corn and grain, it is to be understood, that it is to be done two several wayes, that is to say; in the ear, and out of the ear: in the stack, when it is cleansed and dressed.

Keeping Corn in the ear or in the chaff.

Touching the keeping of Corn in the Ear, or in the Stack, there is no better nor safer way then that already described in the sixteenth Chapter, being free from all offences whatsoever, that can come to hurt it.

Now there be others that cut off the ears of their corn, and then put them into great Chests or Hutches of wood (such as are very frequent and much used in *Ireland*, and other Countries where war rageth) and so keep it sweet and good many years:

Others

Others use to beat it out of the ear, but not separate it from the Chaff, and then laying a lear of the Straw more then a foot thick, to lay a good thick lear of the thrasht corn; & thus lay lear upon lear, till you have made up your stack, in such proportion as you shall think convenient; and this will keep all kind of corn, or grain, or other seeds, sound, sweet, and fit for any purpose, at least a dozen years, or more, as some have supposed, without either too much drying, withering, moistening, or moulding. And sure this is a very excellent way for the storing up of much corn in a very little room, and may as well be done with corn as with straw; only it is not to be done in barn nor house, because Mice, Rats, and other kind of vermine will work much destruction thereupon, but on a Stack or Hovell made and proportioned in such form as was shewed before in the sixteenth chapter, and so it will stand safe without all annoyance, as long as it shall please the owner to keep it; sure I am, it will last thus fully twelve years, yet some Authors affirm, it will last fifty years, but that is a space of years beyond my tryall.

Keeping of Corn out of the Ear or dreſt.

Touching the keeping of Corn after it is thrasht and dreſt, it is divers wayes to be done, as by stowage or place of lear, as Garners, Hutches, and such like, by labour and industry, as with the shovell, or else by device or medicine.

Of Garners.

For Garners, they be made divers wayes, according to the nature of the country, and custom of the people.

Some are made with clay and lome trodden with hair, straw chopt, and such like: but these are the worst, and do sooneſt corrupt corn; for although they are warm, which is a great preservation to corn, yet they yield dust, and from that dust is bred fleas, mites, weavels, and other Vermine which do spoyl corn, and make it easily rot.

Others are made of stone and lime, but they are subject against wet weather, to yield forth a moist dew, which corrupteth and rotteth corn.

Others are made of Brick and Lime, and they are very good against the weavell, and other small Vermine, but the Lime is sharp, and so consequently very unwholesome for all manner of Grain.

The best Garner that can be made to keep all manner of grain

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in, is made of playſter, burnt and brought into morter, and ſo raiſing it up with the help of ſmall ſtones hidden and placed in the midſt of the wall, to make both the inſide and outſide of the Garner of ſmooth playſter, no ſtone being ſeen but hidden at leaſt two finger thick on each ſide, and all the bottom alſo muſt be made of plaiſter; for no floor keepeth corn ſo well, of what kind ſoever it be; and theſe Garners would be placed as neer as you can to the backs, or ſides of chimneys; or as neer the air of the fire as you can conveniently; for as there is nothing more cold then plaiſter, yet it is ever ſo dry and free from moiſture, that with no change of the air or weather it relenteth, but keepeth the corn ever in one ſtate of goodneſs, whilſt the warm ſtanding thereof is ſuch a comfort in the winter, and the natural coolneſs of the thing ſo ſoveraign in Summer, that the grain ever abideth in one ſtate without altetation.

Of Hutches. Now for hutches, or great cheſts, bins, dry fats, and ſuch like, they are made of old dry, and well ſeaſoned Oak boards, plained ſmooth, and cloſe joyned and glewed together, with covers and lids made alſo very cloſe, whereby little or no air can come in: ſome of theſe great bins, or hutches, made of dry boards, are made open and without covers, but they are not ſo good, for the air cooling the upper part of the corn, and the middle part ſweating, breedeth corruption, or muſtineſs, which hurteth and ſpoyleth the corn: beſides, they are ſomewhat too warm, and thereby make any green corn apt to corrupt and ſmell.

Touching the uſe of Garners and Hutches, they are principally to keep Malt after it is dryed, or Barley, which is for the uſe of bread or meal; and here is to be noted, that the beſt manner of keeping Malt, is to keep it in the corn, that is to ſay, in the duſt, and other filth which commeth with it from the kilne, as thus; when firſt you lay your malt on the kilne to be dryed, you know there is at one end a certain ſprout, or ſmall thred, which growes from the corn, and is called the Come, which by the rubbing and drying of the malt falls away, and leaves the corn clean, and ſmug of it ſelf, and when you trim and dreſs up your malt for the mill, is winnowed and cleanſed away: This you ſhall preſerve and put altogether into your Garner or Hutch, which

which will ſo mellow and ripen your malt, that in the ſpending thereof, a peck will go further, than a peck and a half kept of a contrary faſhion; and although ſome are perſwaded that this Come or malt duſt, is a great breeder of the worm or weavel, by reaſon of the much heat thereof, being indeed of the pureſt of the heart of the corn; yet it is not ſo, unleſs ſome rankneſs or moiſture do get to the corn; and then it breeds weavels in infinite aboundance, and therefore by all means be ſure that your Garners and Hutches do ſtand exceeding dry, and then there is no fear of the loſs of corn, nor ſhall you need to dreſs or winnow your malt but as you ſpend it.

Laſtly, here is to be noted, that although I here joyn Garners, Hutches, Cheſts, and Bins together, yet I make them not all of equall goodneſs; for the plaiſter garner is abſolutely the beſt of all, the cloſe hutch or cheſt next, and the open bin laſt; yet any, or all, ſufficient enough to keep malt, barley, or ſmall ſeeds, divers years without imperfection.

It is written by ſome of the antienteſt Authors, that Wheat hath been kept in theſe cloſe hutches or cheſts ſweet, the ſpace of fifty years; yet I hold the rule ſomewhat doubtfull, both becauſe Wheat of it ſelf, lying ſo cloſe packt together, is apt to heat and ſweat, and that heat commonly turneth to faultineſs, and the ſweat to corruption; but that it may thus be preſerved from worms, weavels, mites, and other vermine breeding in corn, it is doubtleſs and infallible.

To preſerve Wheat.

Now for the preſervation of Wheat, which is the moſt principall grain, of greateſt uſe, and greateſt price, and therewithall moſt tender, and apteſt to take hurt, the experiments are divers, as mens fancies, and practiſes have found out; for ſome Husbandmen hold opinions, eſpecially the *French* and *Spaniſh*, that if you take the lees of common oyl (ſo it be ſweet) and ſprinkle it upon your wheat as it lyes, either in the garner, or upon the floor, that it will preſerve it from all corruption and annoyance whatſoever; nor doth it preſerve Wheat only, but all other manner of grain whatſoever; nor doth it preſerve corn alone from miſchief, but if corn by caſualty be tainted or hurt, it doth recover it again, and brings it to the firſt ſweetneſs; and if either worms or weavels be bred in it, the oyl preſently kills

kills them, and frees the corn from that mischief; as for smaller seeds, as hemp, line and rape, this oyl doth not only keep them long and sound, but also feeds and nourishes them, and makes them better, either for the ground, or for use, either in the mill, or in medicine.

There be others that use to take chalk, and beat it to powder, and then scatter it amongst their Wheat, when they put it into the Garner, and have found that thereby their grain hath been wonderfully preserved from all imperfection; and surely there is great reason for the same, because the dryness of the chalk drinketh up the moisture which sweateth from the grain, and is the first breeder of all putrefaction: Also it cooleth and asswageth the immoderate heat which is ingendred in the Corn, by reason of the packt and close lying together.

Again, there be others which use to lay great store of Worm-wood amongst their Wheat, which likewise preserveth it from all annoyances, especially from Worms and Weavels, as also from Mice, Rats, and such devouring vermine; neither will the Corn corrupt or grow faulty, as long as the Worm-wood remains amongst it. In *Italy*, the carefull Husbands use to take a certain dry earth or clay, called earth of *Olinthus* or *Cerinthus*, and this earth they beat amongst their Wheat, and then put into the Garner or Hutch, and it will keep it sound and sweet divers years together; then when they have occasion to use it, with small reeing sives to dress it from the corn, and so preserve the dust, which will last and serve you many years together, even almost an age, as some have reported, and is at this day to be seen in many parts of *Italy*, and other places.

Again, I have for mine own part seen in the Island of the *Azores*, certain very great large Caves, or pits made under the earth, of the fashion of a *Spanish* earthen lear, that is to say, great and spacious in the midst, and narrow both at the top and bottom, like a brass pot, or great glass viall, and made as smooth within as may be, and in these caves or pits, they first lay chaff, and then their thrasht Wheat, filling it up full to the top, or within a handfull thereof, which they fill again with Chaff, and then closing the top with a broad stone, they cover it

it over with earth so close and unperceivable, that you may walk or travel over it without any suspition; and for mine own part, I have my self digged up many of these pits, and found great store of Wheat, both in the high-wayes, and other most suspitious places; and surely it is thought, and experience in those places makes it good, that in these caves or pits you may keep wheat as long as you please, as *Pliny* speaketh of, which is an hundred, or an hundred and twenty years, without hurt or putrefaction either of heat, moisture, worms, weavels, or any other Vermine whatsoever which consumeth or devoureth Corn; yet how I may recommend this experiment to our Nation, I am uncertain, because the much moisture of our climate, and the cold rawness thereof promiseth a contrary effect; for the great enemies unto grain, are violent cold and moisture, and with us it is very difficult to make any caverns under the earth but they must be subject unto both: Therefore onely to those which live in hot sandy Countries, high and free from springs or waters, or in dry and rocky grounds, where these mines or hollow places may be hewed out, as in a main and firm quarry, I recommend the tryal of this practise, with this assurance, that where the ground is fit for that purpose, as in any of your sand grounds or gravell earths, as in *Norfolk*, *Middlesex*, *Kent*, and many other sandy climates; or in rocky scituations, as in *Nottingham*, *Bath*, *Bristol*, and such like, you may keep your wheat good, sound, firm, and free from all annoyances, even as long as you shall please to keep it, both without putrefaction in it self, or waste made by other devouring worms and vermin; but if in a more moist place, as in clay or other mixt earth, which ever is vomiting wet and dewish humours, you are forced to approve this experiment; then you must necessarily lime all you cave or hollow Mines within, at least half a foot thick with tyle sher'd and plaister laid wall-like together, and then the plaister dawb'd at least three fingers thick above all, and so you may keep your corn as safe and as sound as any hot soyl whatsoever; but without it, your corn will not indure a week without rottenness, faultiness, mouldiness, and stinking.

To conclude, having shewed you all the most approved and best experiments for the keeping and preserving of wheat, there

is none better, or so good as this silly plain one, which I will here deliver: and that is, first, as near as you can, reap your Wheat at the change of the moon; for wheat which is so reaped, is seldome or never subject to loss or putrefaction (being got in dry, or in husbandly manner ordered and handled) because that cælestial body hath such a power and influence in the growth of corn and seeds, that as she groweth, so they grow, and as she waneth, so they abate and wither.

And truly for my own part, in my poor Husbandry, I have made this observation, that I have reaped corn at the beginning of the wane (to mine eye and judgment) great, full, and bol'd as the plow-man calls it, and within few dayes after, when it came to thrashing, I have found it most poor, hungry, and small corn: nor could I give or find any other reason for the same, but that it was reaped in an ill and most unseasonable time: for, on the contrary part, I have ever found that corn reaped upon the change, being ripe, full, and every way fit for the barn (and the weather fair and dry above head) it hath never altered, but kept his first and perfect goodness, so that I cannot chuse, but in this case think the observation of the Moon to be a thing of great effect and validity, appointed by God as a second means for our help and profit: when therefore your corn is thus seasonably and well got in, you shall thrash it, winnow it, and dress it so clean as you can, then carry it up into your chambers or lofts appointed for that purpose, and whose floors by all means I would wish to be cast of the best plaister; for boards is too hot, and clay is too apt to breed vermine: On this plaister floor you shall spread your wheat, not above a foot thick at the uppermost, and so let it lye, observing once in four or in five dayes at the most, with a large wooden shovel to turn the wheat quite over & over, and thus doing, you shall be sure to keep it as sweet, sound and good, as when it first came into the barn: for neither can the heat, sweat, nor coldness offend it, the first being cooled and tempered by the opening and dispersing; the second dryed up by the air which hath free recourse into it, and the last comforted by the labour and tossing of the shovel, casting it up and down from one place to another: and though some curious husbands may object that this manner of keeping corn dryeth

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it somewhat too much, and thereby disableth it for some particular purposes, as for seed, and such like: yet in that they are much mistaken; for this stirring and moving of Grain, is not a drying of it, but rather a great comforter and strengthner of it, dispersing back into the corn, those wholsome vapours which should do it good (by way of communication and fellowship with the Grain) and expelling those ill humors which sweating out of it would otherwise confound and hurt it, so that in conclusion, for the true and long keeping of Wheat sweet, sound, and perfect, without loss or corruption, there is no way more safe or easie, than this last expressed, being of all other the best, although in shew it appear sleight and trivial, as for the most part things of greatest moment in this nature do: but to the judicious Husbandman I refer it, whose aim is at the worth and substance, not at the words and curious gloss, set forth in strange ingredients.

To preserve Rye.

Touching the keeping of Rye or Maslin, or, as some call it, munck-corn, or blend-corn, being part Rye, and part Wheat mixed together, that which preserveth Wheat, will also preserve it, for they are grains of like nature, onely the Rye is somewhat hotter and dryer, and therefore will endure somewhat more moisture: yet to speak particularly touching the preservation of Rye, there is nothing better then the plaister floor, and oft turning; the close Hutch is also exceeding good, so is the Pipe or dry fat, but being once opened, and the air entring into the corn, except it be soon spent, it will soon putrifie, for though in the close keeping, it last long, yet when it comes to the air it will quickly receive taint. Lastly, for the profit in keeping of Rye, indeed there is nothing better then to ply it and tread it hard into vessels or barrels, wherein salt hath been much lodged, or other brine or salt matter: provided alwaies that the vessels be sweet and untained, no wayes subject to faultiness or other unsavory smells, from which there is no preservation.

To preserve Beans.

Concerning the preservation and keeping of beans, which are indeed a more gross and fatter Grain then any heretofore written of, and out of the fulness of their substance, more subject to moisture and those dankish humors which corrupt corn:

The careful Husbandman observeth two rules; first, not to thrash any Beans or Pulse, more then for necessary use (as for the Stable or Mill) before it be middle *March*, at which time the Grain, having taken a kindly sweat in the Mow, Stack, or Hovel, is become so dry, firm, and solid, that no floor, wall, or other place of Lear can make it relent, or give again (except great abuse, and too moist keeping) for it is to be understood, that this sort of Pulse or Grain is of it self so exceeding moist and apt to sweat in the Mow, that all Husbandmen endeavour by no means to house it, or lay it within doors, but seek to make it up in stacks and hovels without doors, not so much that house-room is wanting, as that the benefit of the Sun, and Air, which pierceth through the same, dryeth and ripeneth the corn in such kindly manner, as maketh it as serviceable as any other: and indeed, the first invention of stacks, hovels, reeks, and such like, did not spring so much from the want of housing, as from the good and profit which the Husbandman found to accrue to t his kind of Grain, onely by reason of laying it abroad; for it is certain, that Beans and Pease neither grow together, nor ripen together, but put forth their increase one after another; for you shall see upon one stalk, blooms, swads, and ripe cods: so likewise in the gathering of Pulse (when it is reaped from the ground) you shall see some dry and withered, some ripe, some half ripe, some absolutely green, and as but now in growing.

Now all these must be reapt together, and if you stay them in the field till all be of like dryness, questionless the oldest will shake and shed upon the ground before the youngest be ripened, and what that loss will redound to, every Husbandman can judge: So also to house and mow up in a close mow, the dry pulse with the green, surely the green cannot chuse but inflame, and heat the dry, and the dry so heated to give fire to the green, till both be either rotted or consumed: and hence it came, that expert Husbandmen devised to lay their pulse, for the most part, ever without doors, in stacks, reeks, and hovels, that the Sun and wind passing thorow them, might bring all the grain to an equal dryness and hardness.

Again, Pulse being of all grain the coorsest and fullest of substance

ſtance in it ſelf, and the ſtraw ever big and ſubſtantial, and full of broad thick leaves, ever moiſt and ſappy; it muſt needs follow that this grain muſt ever be moſt apt to ſweat in the mow, and ſo neceſſarily craveth the greateſt ſtore of air, and the longeſt time in drying; ſo that to return to my firſt purpoſe, it muſt needs follow, that no Beans or Peaſe can be ripe or ſeaſoned in the mow, till it be mid *March* at leaſt; for it is an old ſaying, among the beſt husbands, *That a March wind is ſalt which ſeaſoneth all Pulſe*: And if uſe or neceſſity compel men to thraſh their Pulſe before that time, the grain is ſo imperfect, that it muſt be kiln-dryed, or elſe it is fit neither for the uſe of bread nor provender.

Now herein is to be underſtood, that Peaſe or Beans which are kiln-dryed, may be kept ſound, ſweet, and good, either on plaiſter-floors, boarded-floors, or earthy-floors, the ſpace of many years, without turning, or toſſing; nor need you to reſpect how thick the heap lye, ſince Beans after they are once dryed on the kiln, or in the Sun, never after will thaw, give again or relent, but remain in their firſt ſoundneſs: But if you preſerve your Beans for other uſes, as to boyl in your pot, and feed your ſervants withall, as is uſed in *Somerſet-ſhire*, and many other Weſternly parts of this Kingdome, then it ſhall be good for you to take oyl-barrels, oyl-cask that is ſweet, and firſt Calk them all over within and without with aſhes, and then put your Beans therein, and cloſe up the heads, and as it is affirmed by divers great authors of Husbandry, it will keep Beans ſound, ſweet, and good, twenty years: nay, ſome gives inſtances of Beans which have been thus kept and preſerved the ſpace of one hundred and twenty years; and ſurely I am perſwaded that if Beans be well and dry got, and thraſht at a ſeaſonable time of the year, as in *March*, *April*, that thus kept, they will laſt the uttermoſt of a mans pleaſure.

Preſerving of Peaſe or Fetches.

Now for the keeping or preſerving of Peaſe or Fetches, which of all other Grain whatſoever, is moſt ſubject to rottenneſs and imperfection, becauſe out of its own nature it is apt to breed worms, weavels, and mites, by reaſon of the much luſhiouſneſs and ſweetneſs of the kernel of the Grain; you ſhall in all things obſerve the ſame courſes that you do with your Beans,

Beans, both touching your gathering, drying, ſtacking, and alſo thraſhing; for as they are moſt apt to go together, being near of nature and condition one to the other, ſo it is fit that you do apply unto them one and the ſelf ſame medicine or remedy.

And herein is to be noted, that as peaſe are of more general uſe then beans, as for Horſe Provender, feeding of Swine, Pidgeons, Pullens, and ſuch like; as alſo for bread, pottage, to boyl with or without meat; for certainly, it is a moſt wholſome and ſtrong food, as may be ſeen by the people of *Devenſhire*, *Cornwall*, and *Somerſetſhire*, of whoſe great ſtrength of body not any reaſon can be given more probably then their much feeding on this grain, and their acquaintance with much and ſtrong labour: So they ought with more care and circumſpection to be preſerved from all thoſe annoyances that naturally are apt to hurt them, as worms, rottenneſs, mould, muſtineſs, and ſuch like.

And firſt, there is nothing better for the long and well keeping of Peaſe, then the very well drying of them, either in the Sun, or on the Kiln, eſpecially thoſe which you uſe for bread, provender, or feeding of Swine: and although ſome Husbands uſe to feed Swine with undryed Peaſe, nay, many times both undryed and undreſt, that is to ſay, the Pulſe or Chaff not taken away; and are of opinion that the Grain ſo given, ſooner feedeth and fatteth up Swine then the other, yet they are deceived: for albeit it ſwell and puff up a beaſt, yet is the fleſh and fat neither ſo good, ſound, and long laſting, as that which is gotten with dry food, nor doth it make a Swine ſo thirſty; and the Husbandman is ever aſſured, that when his Swine drinks not well, he feeds not well: therefore what Peaſe you keep for bread, or feeding of Cattell, by all means dry them well, and lay them either in Garners or Floors, and they will laſt ſound and good without breeding worms or weavels, as long time as you pleaſe. But thoſe which you keep for food at your own table, as in pottage, or other uſes, muſt by no means be too much dryed, becauſe then they ask a double time in boyling, and ſpend a double quantity of fewel in their preparing.

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Some uſe after they be clean thraſht and dreſt, to lay them in a cool cloſe Garner, either of Plaiſter, Earth, or Boards, of which Plaiſter is the beſt; as for any thing that relenteth or yieldeth moiſture, as lime, ſtone-walls, or ſuch like, it is moſt hurtfull, and immediately maketh peaſe mould and rot: alſo it is good to lay your peaſe in thick heaps in your Garner, for that will preſerve them moiſt the longer time: but to ſpread them thin upon the floor, by which means the Sun, Air, and wind may paſs thorow them, is not ſo good, for it dryeth them too ſore, and taketh from them much of their ſweetneſs and goodneſs, which ought moſt carefully to be preſerved. There be others which preſerve theſe tender meat Peaſe by thraſhing them up, and then letting them lye in their own pulſe or chaff, and not dreſſing them, but as they have occaſion to uſe them; and queſtionleſs this is a very good and laudable way; for the pulſe and chaff doth maintain them ſweet and moiſt, and yet keepeth them withall ſo warm and comfortable, that they laſt much longer, then any other way whatſoever; and in this manner of preſerving peaſe is to be noted, that by all means you muſt let them lye upon a dry earthen floor, ſo long as they are in the chaff, rather than on the board, or on plaiſter; and yet in this caſe the boards are better then plaiſter.

Laſtly, and which indeed is the beſt experiment of all other, if you intend to keep peaſe any extraordinary long time, you ſhall take barrels or dry Casks, well and ſtrongly bound, and pitch them within exceeding well, with the beſt pitch or bitumen that you can get, and then ſprinkle the pitch all over with ſtrong vinegar; then take your peaſe, being clean and well dreſt, and put them into the barrels, preſſing them down cloſe and hard; then head up the barrels, and let them ſtand dry and cool, and they will preſerve your peaſe ſound, ſweet, and good for any uſe whatſoever, as long as you pleaſe, be it for ten, twenty, or thirty years, according to the opinions of antient Husbandmen, and other provant Maſters, that have lived and commanded in Towns beſieged, and Towns of Garriſon; neither ſhall any worm, mite, or weavel ever breed in it, or offend it: nay, if any have in former time

time been bred in them, this manner of keeping the grain killeth them, and destroyeth them for ever.

Preserving of Lentils or Lupins.

Now there is another sort of Pulse, which are called Lentils or Lupins, which albeit they are not so generally used for the food and sustenance of man, yet they are for Horse, Swine, and other cattle, as much in request as any grain whatsoever, and indeed do feed fatter, and sooner than other ordinary pulse, and the flesh so fed, is sweeter and pleasanter both to the eye and to the taste, then that which is fed with Beans or Pease; also they are a Pulse very Phylical and good for many medicines, as may appear by the works of many learned Physicians; and these the longer they are kept, the better they are, and fuller of profit. To preserve them then in good and sound estate, it is meet to reap them in very fair weather, and to stack them up exceeding dry, and if they be laid in the barn, or any close house, it is not amiss; for they will indure housing better then any other pulse, yet the sooner you beat them out of the straw, or thrash them up, the better it is; for Husbandmen suppose there is no greater hurt to this kind of grain, then the long keeping it in the straw; for it is of such rankness, that the very straw, and cods, breed in it much putrefaction; and I my self observed both in *Spain*, and in the neighbouring Islands, where is great aboundance of this kind of grain, that they do no sooner gather it and bring it home, but immediately they thrash it; nay, some thrash it in the fields upon the lands where it grows, and so bring it home, then spread it on fair boarded floors in very great heaps, or else lay it up in close hutches, or bins, such as wheat and other white grain is to be kept in. If you dry this kind of pulse in the Sun, or upon a kiln, with a very moderate and soft fire, and then lay it up either in a close Garner, or close Hutch, it will last many years sound, good, and without corruption. There be other Husbandmen which mix with this grain, when it is thrasht, a half part of hot, dry, white sand, or at least cover the whole heap of pulse with the sand, and do find that it keeps the grain very sound and good many years together. But to conclude, if you take strong vinegar, and a good quantity of *Laserpitium*, dissolve and mix them very well together, and then having laid your Lintils or Lupins together on

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a fair boarded floor, in large, broad, and flat heaps, about two foot, or two foot and a half thick; with the vinegar and *Laserpitium* sprinkle over all the heap, and not any change of weather, frosts, worms, or other vermine shall do them hurt, but they shall remain sound and good as many years as you please to keep them: there are other Husbandmen, that instead of this before rehearsed, take only sweet oyl, and sprinkle it all over the Grain, and find the same vertue and effect, for neither worms nor other vermine will touch it, nor will the radical humour thereof at any time waste or decay, but remain strong, full, and sound, without any kind of diminishing; nor shall you find any abatement of it, or shrinking in the measure, but that which was a bushel this year, will be also a bushel the next year, and as many years after as you please, which is no small profit to the owner.

Whereas on the contrary part, if the Grain be either dryed in the Sun, on the kiln, or by the wind, you shall hardly have of every such bushel so dryed, three pecks and a half again, which is by computation at every quarter, which is eight bushels, full one bushel lost, and yet this pulse thus preserved, as beforesaid, shall be as good for any use whatsoever; fit for such corn to be imployed in, as any other dryed grain whatsoever, and yield as much every way, and altogether as good meal, and as good meat.

Preserving of Oats.

Now touching the preserving and keeping of Oats, it is to be understood, that of all grain it is least casuall, because of it self naturally it breedeth no evil vermine, and is again preserved and defended with a double husk, whereby neither cold, moisture, heat, nor dryness, is able so soon to pierce and hurt it as other grains, which are more thin clad and tender; yet because it is of great and necessary use both for cattel and pullen, and that neither the husband nor housewife can well keep house without it, you shall know, that the best way to preserve it longest, is, after it is thrashe, to dry it well either in the Sun or on the Kiln, and then either put it into a close Garner, or close Cask, and it will keep many years sound and sweet.

Touching the preserving of Oat-meal, which is the inner kirnel of the Oats, and a grain of most special use in the Husband-

bandman's house, as in his pottage, in his puddings, and in many other meats necessarily used for the labouring man; it is an experiment not altogether so curious as any of the rest formerly written of, for no Oat-meal can be made, but the Oats must be exceedingly well kiln dryed, or else the kernel will not part from the Hull, and being dryed, as is fit, that drying is sufficient to keep and preserve the Oat-meal divers years.

Provided ever, that presently after the making of your Oat-meal, you put it into dry close cask, or dry close garners (but cask is better) and so that it may remain exceeding dry, (for any thaw or moisture corrupts it) and as near as you can let it have (if it be possible) some air of the fire; for the warmer it stands, the better and longer it will last, as experience sheweth.

Preserving of any meal.

For the preserving and long keeping of any sort of meal, there is no better way then first to boult and searse him from his bran, for the bran is very apt to corrode and putrifie the meal, and to bring it to a faultiness or mustiness: then into very sweet and clean dry cask close and well bound, tread in your meal so hard as you can possibly tread it, and then head it up close, and so you may keep it either by land or water so long as you please, and when you have any occasion to spend of it, be sure to looſen no more of the meal than you presently use, for the faster and closer the meal lyeth together, the longer and sweeter it will last, for it is the gathering of the air that only corrupts it.

And here is also to be noted, that you should not presently as soon as your meal is ground, boult it from the bran, but rather let it lye a week or fortnight in the bran, in some close bin or trough, and then after that time boult or searse it, and you shall find it to afford you in every bushel, more meal by at least half a peck then if you should presently boult it as soon as it comes from the mill; whence it proceeds, that the cunning and skilful Baker will ever have a week or fortnights provision of meal before hand, which lying so long in the bran, pays double interest for the continuance.

Now if it fall out so, that either by trade or merchandise, or other occasions, you buy any meal by way of transportation, which is caskt up, (as, much meal is sold by the barrel) you shall presently as soon as you have bought it (if it be for your own use

use or expence) break open their heads, and empty the meal upon fair sheets on a clean floor, and then spreading it abroad, let the Sun and Air pass thorough it, which will dry up the sweat, and if there be any taint of faultiness, take it away, and bring the meal to his first sweetness, and then immediately boult out the coorse bran, and after, as was before declared, tread it hard into fresh and sweet cask; and thus you may keep your provision of meal all the year long: nay, if need require, two or three years, for after the first sweat is taken away, and kindly dryed, there is no doubt to be made of any that shall follow after.

Preserving of all small seeds.

Lastly, touching the preservation and keeping of all manner of small seeds of what nature and quality soever they be, whether Hemp, Lime, Rape, Mustard-Seed, or any other Garden Seed whatsoever, though truly and properly they last but one year, nor are fit for Seed or Increase after that date expired: yet in as much as they are midicinable after, and a much longer time; therefore you shall understand, that the best way to keep them safe and sound, and fittest for use and profit, is, first to gather them as soon as you perceive them to be ripe, and the weather being bright, clear and dry, then you shall dry and wither them in the shade, and not in the Sun, especially upon a plaistered floor, where the light looketh to the South, and be sure that as little Sun and moisture come to them as you can, for both are main enemies; which done, bind them up in bundles without thrashing, and so hang them up, and keep them in their own cods, and they will last for all uses, a full year, and for some particular uses two or three years, and in this manner you may also preserve all manner of herbs, weeds, flowers, roots, and the barks or rinds of all manner of trees.

CHAP. XIX.

How to keep Grain, either for transportation by Sea, or for use in a Town of War or Garrison, from one year to one hundred and twenty.

TO speak of the Grains and pulses which are meetest for the Sea, and their several uses.

The use of grain and pulse at Sea. Of Rice and the Use.

It is to be understood, that the best and principallest Grain which is indeed both most sweet, most fresh, most pleasant in taste, and most long lasting, is Rice, which although it grow not much in our Kingdome, but that we are beholden to our good Neighbours for the trade thereof, yet it is in such plenty where we fetch it, that we need neither complain of the scarcity, nor the cost, and so much the rather, in that a peck thereof will go further then a bushel of any other Grain: Of this Rice is made many good and wholsome dishes, some thick, some thin, some baked, some boyled, as thus: If you take a quarter of a pound of Rice, and boyl it in a pottle of water, till it come unto an indifferent thickness, and then put into it a good lump of potted or barrelled butter, and as much sugar as shall saltwise season it to an indifferent sweetness, it is a dish of meat meet for an Emperour at Sea, wholsome, good, and light of disgesture, and will be as much as four reasonable men can well eat at a meal; for the nature of the Rice is such, that it will swell in boyling, and grow to that bigness, that in an instant it will thicken a pottle; some use the night before they boyl it, to steep it in so much water, as will onely cover the Rice all over, and then the next day boyl it in a pottle of water or more, and the Rice so steeped will so swell, that all the first water will be drunk up, and a great deal of less boyling will serve to make it ready; and sure, then this a man cannot find a cheaper way to feed men, since one pint of water, and the fourth part of a quarter of a pound of Rice (which come not to above half a penny at the dearest reckoning) is a meal sufficient for a mans eating, having Bisket and Drink proportionably. And this dish of meat being thus thin boyled, is called Sea-Lob-lolly, and after salt feeding is wondrous wholesome and comfortable to any man, whether he be sick, sound, or diseased, and both abateth infirmities, and hastneth the healing of all wounds.

There be others, that after they have steeped this Rice (as afore-said) do then boyl it in like manner, till it be so thick that a spoon may stand upright in it, and no liquidness of the water perceived; then put a good lump of butter into it, and boyl it with it, and stir it about, and it will make it come most clean out of the pot in which it is boyled; then season it with Sugar,

Sugar, and a little Cynamon, and it will be a dish of meat right good and delicate, and meet for any man of what quality soever, that is worth goodness or preserving; nor need the quantity exceed the proportion already prescribed.

Again, if you have meal in the ship, if you take of this Rice steeped in water, & a little lightly boyled & seasoned with Sugar, Cinamon, and Ginger, and a good quantity of Butter, and then bake it in little pasties, you shall find it a most delicate, pleasant and wholesome meat, and that a penny in it shall go further, and give better contentment then four penny worth of Beef, Ba con, Fish, or any other hard salt meat; yet I do not wish any man of ship-board to make this a continuall feeding dish, for it is both too pleasant and too strong, and where evacuation of some humours are wanting, may breed inconveniences in strong bodies; but rather to use it once a week as a physical nourisher, or for the comfort of sick and diseased men, whose stomacks are tane away, or else weakned; there may be made also of this Rice in time of necessity (being ground to a fine meal) an excellent good Bread or Rusk, which is pleasanter, sweeter, and much longer lasting then any made of wheat, or any other grain whatsoever; besides many other Seed, which would in this place shew but too much curiosity to repeat.

Wheat, and the use.

The next Grain unto Rice, which is of estimation & great service at Sea, is wheat, of which although there be divers kinds, yet they are all alike for the serving of this purpose; onely the large and thick hull'd wheat (being well dryed) will last the longest, but the small and fine skinn'd wheat yields the purer flowr, and makes the better meal: now of this wheat is made divers dishes of meat, for some to take it, and bruise or beat it in baggs till the upper skin be beaten off, and then having drest and winnowed it, boyl it in clean water till it burst, and grow as thick as pap, then take it from the fire, and being hot, put it into several dishes of wood, or trays, so much in every dish, or tray, as may serve four men, and so let it cool, then give it to the sick or sound as you shall be directed, and it is an excellent good meat, either cold or else hot, and a little butter melted with it, or being again boyled in fresh water, and seasoned with Salt and a little Sugar, it makes an excellent Grewel, or Loblolly, which is a very sove-

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raign at Sea. Alſo your parched Wheat is a very good food at Sea, and of much requeſt and eſtimation, being ſprinkled with a little ſalt; and of this food a little will ſerve a man at a time, by reaſon that the much ſweetneſs thereof ſoon filleth and cloyeth the ſtomack, yet it is wondrous light of digeſtion, and breeds great ſtrength, and much good blood, as we daily find by experience.

Of Oat-meal and the uſe.

The next Grain unto this which is to be recommended to the Sea (and which is indeed not any thing inferiour to either of the other going before, both for ſtrength and laſting) is Oat-meal, which by reaſon of the great dryneſs, and drying thereof, feeles little or no imperfection at the Sea, as being unapt to ſuck or draw in any of the ill or moiſt vapours thereof. Of this Oat-meal is made many good freſh, and comfortable meats at Sea, as Grewel, or Lob-lolly, by boyling it in freſh water, and ſeaſoning it with Salt, and (if you have it continually) ſometimes with Sugar and a few Currants, and a little Mace, which is meat of great ſtrength and goodneſs, eſpecially for ſuch as are ſick and weak; for it is a great reſtorer of nature, and a purger of the blood; alſo to ſteep the whole Grotes of Oat-meal a night in water, and then draining them, and putting it into a bagg, boyl it till the Grots break; then putting it out of the bagg, butter it with butter, and it is an excellent food; as alſo boyling Oat-meal in freſh Water with Barm, or Dreggs, and the hinder ends of your Beer-barrels, makes an excellent good pottage, and is of great uſe in all the parts of the Weſt Country, eſpecially, where Marriners or Sea-men live, and are called by the name Drouſſon pottage. Alſo, of Oat-meal is made that meat which is called in the Weſt, Waſhbrew, and may be made at the Sea at your pleaſure, being a meat of that great account amongſt *Devonſhire* and *Corniſh* men, that they will allow it to be a meat of ſingular great ſtrength and goodneſs, and withall ſo light of digeſtion, that a man can very hardly ſurfeit upon it at any time; and I am the rather induced to believe the ſame, becauſe I have obſerved and ſeen many of the labouring men of that Country to eat ſuch an unmeaſurable quantity thereof, that in mine eye one mans ſupper would have ſerved a whole family.

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But you will say, Hunger and labour are such excellent Sauce, that they digest any thing.

To that I answer, that I have seen Gentlemen and Gentlewomen of that Country, of whom as much curiosity hath attended, as is lyable to the City, nay, such as have had sickness their best familiar, yet eat of this with great and sharp appetite, and when health was most to be feared, then to boast of most soundness. This *Washbrew* is to look upon like Painters Size, or new made Jelly, being nothing but the very heart of the Oat-meal, boyled and drained to that heighth and thickness, having neither Hull nor Bran in it, but the pure Meal and Water, and is to be eaten either with Wine, strong Beer, or Ale, or with clarified Honey, according to mens stomacks and abilities. Now this the eaters thereof affirm, that by no means it must be chewed, but rather swallowed by the spoonfull whole, because chawing like a pill makes it taste unpleasant. There is again another meat to be made of Oat-meal, which is called *Girt-brew*, and is somewhat more coorse, and less pleasant than *wash-brew*; having both the bran and hulls in it, yet it is accounted a food of a very good strength, and exceeding wholsome for mans body, and of my knowledge much used and much desired of all labouring persons that are acquainted with it: Many other foods there are to be made of Oat-meal, but these shall be at this time fully sufficient.

Of Barley and the use.

The next Grain to this I account Barley, which may be every way used like unto Wheat, either to make Grewel, to be creyed, parcht, or boyled, and for Barley for this purpose of food, the best is French Barley, the next is Barley big, or bear-Barley; and the worst are the spice or Battledore-barley, and our common English Barley.

Buck and the use.

And as Barley or Wheat, so you may use your buck, and your *Indian Siligo*, for they are of like nature, onely they ask a longer time in their beating, steeping, and boyling, because they are naturally more hard and more dry, by reason of the heat of the Climate in which the best grow; and it is ever to be observed for a rule, that the dryer you keep your Corn at Sea, the better it is, and sweeter and longer lasting.

Now

Of pulse, and first of beans, the use.

Now having shewed the use of these lighter grains, I will come to Pulse, and shew their use and benefit at Sea, or in besieged Towns: and of pulse, I will first speak of Beans as a principall food, wholsome and strong, and though not so fine and light of disgestion as any of the former, yet exceeding hearty and sound, and a great breeder of good blood: They are for the most part to be boyled whole, till such time as they appear soft and tender, or begin to break, and then drained from the water are served in trayes, and well salted, and so eaten; a pottle whereof is thought a full proportion for four men: and of these beans there are divers kinds, as the common Garden-bean, or the French-bean, which is great, broad and flat, and these are the best to boyl either with meat, or by themselves, and ask the least labour, because their outter skin is most tender, and the inward substance most apt to be molified and softned: they may also be boyled both when they are young and green, and when they are old and dry, and the meat at both times is good and savory.

The French-bean.

The Kidney-bean.

The next bean to these are the Kidney-bean, which is flatter and lesser, and neerer the proportion of a Kidney then the French bean is, and this is also a Garden-bean, and whilst it is young and green is to be eaten sallet-wise after they are boyled, both the Cod and Bean together, and it is certain, a better sallet cannot be tasted; for the Cod or Husk is every way as excellent in taste as the bean is; but after they grow old and dry, and that the moisture is gone out of the cod, then it is meet to thrash them, and boyl them like the French-bean, and they are every way as good meat, and as soon boyled, and as tender.

Common field beans, the use.

The next bean to these are your common and ordinary field beans, which having tough and hard skins ask more boyling then the other beans, and are somewhat harder in taste, yet a good sound food also; there be many that parch them in the fire, and think them then the best meat, because the fire sooner breaks the skin, and softneth the kirnel; because they cannot be done so abundantly, and therefore are not so much in use.

Of pease and the use.

After this great sort of pulse, I will now speak of the smaller sort, as pease, and their like; and of pease there are two kinds, the Garden pease, and the field pease, and for this use (albeit both are very good) yet the Garden pease are best, for they are soonest boyled

boyled and are moſt tender, and ſerve for moſt uſe, as for pottage, boyling, parching, ſpelting; and of theſe Garden peaſe, there are divers kinds, as white peaſe, French peaſe, Haſtings, Rounſivals, and ſuch like, the firſt being the longeſt laſters, the ſecond the pleaſanteſt in taſte, the third the earlieſt and tendereſt, and the laſt largeſt and fulleſt.

Several ſorts of Garden-peaſe.

The field peaſe are only of two kinds, as the white peaſe and the gray peaſe; and they ſeldome make pottage, becauſe they are unapt to break, but are only for boyling and making of leap peaſe, or for parching, yet a good and a ſtrong food: and as we uſe peaſe, ſo in other Countries they uſe Lupins, Lentils, Tares, Fetches, and ſuch like ſmaller pulſe, but they are neither ſo good, wholſome, nor ſavoury in taſte, being a kind of grain more rank, fulſome, and breeding of ill blood and infection within: theſe in caſes of Sea-fare and war-fare, ought principally to be eſchewed and ſhunned.

Now it reſteth after this long digreſſion of theſe ſeverall grains, and their uſes, with the meats and profits which are made of them, that we come to the ſafe manner of keeping and preſerving them either by Land or Water, for Victual, or Tranſportation, ſo as they may laſt and indure without ill ſmell or rottenneſs.

Grain for trade.

And firſt for tranſportation of grain by Sea, it is two wayes to be done, as either in great quantities for trade and the victualling of other nations, or in ſmaller quantity for victualling the men in the Ship, prepared for a long and tedious voyage.

To tranſport Grain for trade.

For the tranſporting of Grain for trade in great quantities, it is to be intended the voyage is ſeldome long, but from neighbour to neighbour, and therefore commonly they make cloſe decks in the ſhips to receive the grain, fair and even boarded, yet if ſuch decks be matted and lined, both under, and on each ſide, it is much the better; and this matting would be ſtrong and thin. There be ſome which make the decks only of mats, and ſure it is ſweet, but not ſo ſtrong as the boards: therefore the beſt way of tranſportation, is, to have ſtrong boarded decks well mattted; and then ſpreading the Corn of a reaſonable thickneſs, to cover it with matting again, and then to lay corn on it again, and then mats again, that between every reaſonable thickneſs of

Grain a mat may lye; the profit whereof is, that when the Corn with his own heat, and the working of the Sea shall begin to sweat, which sweat, for want of air to dry it up, would turn to putrefaction.

Then these mats thus lying between, will not onely exhale and suck up the sweat, but also keep the Corn so cool and dry, that no imperfection shall come unto it. And here is to be noted, That these mats should rather be made of dry white bents, then of flags and bulrush; for the bent is a firm, dry, crisp thing, and will not relent or sweat of it self, but the flag or bulrush is a spungy and soft substance, which is never empty of its own and other moystures.

Transporting of Victuals.

Now for transporting of Grain, for Victuals for the Ship, which is in much smaller quantity, because it is but for the private use of a few within the ship; the onely best and safest way, is, to take Salt-fish barrels, or any Cask in which any Salt first hath been piled, as Cod, Herrings, Salmon, Sprats, or any other powdred Fish; and whilst the vessels are sweet, you shall chalk them both within and without with plaister, daubing them all over; then into them put your Grain of what kind soever it be, and head them up close, and then stow them in such convenient dry place of the ship, as you shall thick fit, and questionless, if belief may be given to the worthiest Authors which have writ in this kind, you may thus keep your Grain sweet, sound, and in full perfection from one year to an hundred and twenty years; but certainly daily experience shews us, that all kind of Grain thus put up and kept, will remain sound and sweet, three, four, and as some say, seven years, for so far hath lately been try'd; and what here I speak of ship-board, the like may be done in any Town of War or Garrison, whether besieged, or not besieged, or in any other place, where any necessity shall compell; the proof of this manner of piling or putting up of Grain, serveth as well for Land as Sea.

CHAP.

CHAP. XX.

The Inriching of all manner of barren Grounds, and to make it fruitfull to bear Hopps.

THe Hop of all plants is the moſt tender, and can endure neither to rich a ground, nor yet too poor: for being planted in the firſt, it bringeth forth only leaves and no bells, and in the latter yieldeth neither leaves nor bells.

Abating fertility.

Now in the firſt ſort of Ground, which is fertile and rich, I have nothing to do but only to adviſe how you may allay and leſſen that too much fatneſs, by mixing your hills well with Chalk, or ſmall ſharp Gravel, if it be a haſſel or mix'd mould: and with good ſtore of red ſand if it be a ſtiff clay, for either of theſe mixtures will in ſhort ſpace abate any fertility.

Increaſing of fertility.

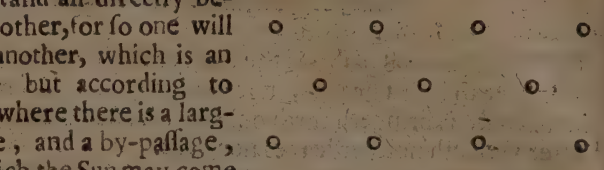
But if the ſoyl be contrary to this, that is, extreme barren, then you ſhall ſeek by theſe means following to increaſe the fertility. Firſt, when you have taken a view of that barren earth, which you intend to convert to a Hop-garden; you ſhall firſt look to the ſituation thereof, whether it lye high or low, whether it be ſubject to inundations or drownings, or that it lye ſafe and free from any ſuch annoyance: If it be ſubject to great and deep over-flowes, then it is no ground for this purpoſe, but if it be onely lyable but to ſome ſmall waſhings, then you may by a few ſmall drains & ſewers caſt through your alleyes, convey away the water to ſome lower grounds, ſo as it may not continue long in the Gardens to do hurt. Beſides, for a further ſafety to the Hop, you ſhall make your hills a great deal bigger and higher, that when any over-flow ſhall happen, the water may not reach above the mid-part of the hill at the moſt, for the root may endure moiſtning, but not drowning; and this water thus running through the alleyes, and not drowning the root, will bring to the ground very much fertility. But howſoever, after you have eas'd your ground of theſe particular faults, yet the generall fault, which is barrenneſs, will remain ſtill: therefore, having plotted out your Garden, and fenced it ſufficiently about, you ſhall then caſt up you hills about *Michaelmas*, placing

Choice of Earth.

Draining water.

Casting of hills and allies.

them in a very orderly manner, and making alleyes between them of four or five foot breadth between hill and hill, so as a man may walk at pleasure through and about them: neither shall these hills stand all directly behind one another, for so one will overshade another, which is an annoyance, but according to this Figure, where there is a largness of space, and a by-passage, through which the Sun may come to give comfort to every Plant.



These hills, if the ground be free from water, may be raised about two foot, or a foot and a half high, and of a compass answerable to the heighth; neither so little, that the hill may be sharp like a Sugar-loaf, nor yet so big, that the hill may lye flat, and so retain and hold any rain or wet, which shall fall upon it; but you shall keep a due middle proportion, making the hill convenient for your Plants and Poles, and so as it may shoot or put off any wet, or other annoyance, which shall fall upon it.

The composition of the enriching of hills.

Now these hills you shall not make intirely, all of one mould, but you shall take, as it were, a third part or better thereof, then another part of the earth which lyeth under dung-hills, and the last part of Sope-ashes; and these three bodyes you shall mix equally together, and of them compound your Hop-hills: but if this seem somewhat difficult, and that you cannot find enough for your purpose of either of these manures, then you may take three parts of the naturall earth, and but onely a fourth part of the other two, and thereof mix your Hop-hills, and it will be sufficient to afford you profit enough, provided you be able once in three or four years to renew it, for so long this will last in full strength and power.

Preparing of the allies.

When you have thus made up your hills, you shall then pare up with a paring shovell all the green swarth quite through all your allyes at least four fingers thick, and with the swarth so pared up, you shall cover all your hills almost to the top, turning the green swarth next unto the earth, so as it may rot, for that is an excellent manure also: then when your allyes are all

thus

hus cleanſed of their ſwarth, you ſhall take good ſtore of braken, or fern, and ſtrow it all over quite thorow all the allies, ſo that it may lye in a good thickneſs, almoſt to the midſt of the hills, which having all the Winter to rot in, will not only be an exceeding comfort to the hills, and preſerve both them and their plants from many evils, but alſo being ſhovelled up together with the earth in the ſpring time, will be a marvellous ſtrong manure wherewith to repleniſh the hills, and to make them to proſper exceedingly, and to ſave much other coſt and charges as well in manure as in carriage.

The Planting of Hopps.

When your hills are thus inriched, and your allies thus prepared, you ſhall then open your hills in the top, and ſet your plants, that is to ſay, in every hill four plants at the leaſt, being well prepared; and this ſhould be done in the month of *October*, and theſe plants muſt be ſet good and deep in the earth, and covered all over at the leaſt four fingers thick: and if with the earth which covereth theſe plants you mix Ox-blood and Lime, it will not onely give great comfort and nouriſhment to the Plants, but alſo defend and ſave the roots from worms and other vermines, which otherwiſe would ſeek to deſtroy them.

Poling of Hopps.

After your Garden is thus planted over, you ſhall then let it reſt till the following Spring, and about *April*, finding the ſmall Twines of your Hopps iſſued out of the Hills and running alongſt the ground, you ſhall then ſet up your Poles, which Poles, ſo they be long and ſtreight, may be of any wood you pleaſe, as either Aſh, Elme, Withy, Willow, or Sallow, and in the ſetting up of theſe poles, you ſhall have two very carefull reſpects: Firſt, that in putting in of the poles, and faſtening them with the earth, you do not hurt the Hop roots, which a ſmall careleſneſs may do, but be ſure to ſet them cleer at the roots; and that you may do it the better, and make your poles to ſtand the faſter, it is good that you have an iron auger, therewith firſt to pierce the ground, and then to put the pole in after, and ſo ram it in hard that it may not ſtir. The ſecond care is, that you place not one pole to overſhadow another, but that they may ſtand ſo clear one from another, that which way ſoever the Sun ſhall caſt his beames, yet every plant (as it winds about

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the pole) may be an equall partaker of the ſame.

This, with a ſmall obſervation in the ſetting up of the poles may eaſily be performed: the number of poles that you ſhall ſet on every hill, muſt be anſwerable to the Syens which ſhall iſſue from the roots, allowing to every pole two Syens at the leaſt, and not above three at the moſt: theſe Syens (when your hills are poled) you ſhall with you hands twine about their ſeverall poles, and thoſe which are but new peeping from the ground, you ſhall ſo fold among the other Branches, as they may of themſelves run about the pole; and as theſe, ſo alſo all the other twigs, which are any way derived from the main Sien, leaving not any at all to run upon the ground; for that is altogether profitleſs, and to no uſe.

Of weeding Hops.

For the weeding of this barren earth thus made into an Hop-Garden, there is little care to be had: for firſt, the ſope aſhes wherewith the hills are manured, the Ox blood and the Lime, are ſuch enemies to all manner of weeds, that they will not ſuffer any to grow where they abide: Next, the Braken and Fern, which covereth the alleyes, is ſuch a poyſoner and ſmotherer of any thing that ſhall grow underneath it, that it will not ſuffer any weed to peep or ſpring up through it; yet if in any eſpecial place, where neither of theſe defences come, it happen that any weeds do grow, then you ſhall with your beſt care cut them away, or pull them up, and ſo your Garden ſhall remain comely, pleaſant and fruitfull to every proſpect.

CHAP. XXI.

A generall computation of men, and cattels labours: what each may do without hurt daily.

Plowing and Sowing.

TO ſpeak generally of all Husbandly works, where the Country is tolerable, without any extraordinary difficulty, you ſhall underſtand, that a man may well in ſtiff grounds, plow an Acre, or an Acre and a half, and in light ſand grounds two or three Acres with one Team in a day, and he may plough and ſow in ſtiff ground two Acres and an half each day, and in light ground four at leaſt with one Team; and alwayes what he ſoweth, that he may harrow the ſame day alſo.

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A man may well mow of good and deep loggy meadow, or of rough, uneven meadow, every day one acre; mowing clean and making a ſmooth board of well ſtanding and good ſmooth meadow, an acre and a half each day: and of very thin and ſhort graſs, or upland meadow, two acres at the leaſt every day.

Alſo, he may mow of Corn, as Barley and Oats, if it be thick, loggy, and beaten down to the earth, making fair work, and not cutting off the heads of the ears, and leaving the ſtraw ſtill growing one acre and a half in a day: but if it be good, thick, and fair ſtanding corn, then he may mow two acres, or two acres and a half in a day; but if the corn be ſhort, and thin, then he may mow three, and ſometimes four Acres in a day, and not be over-laboured: Alſo of beans he may mow as much, and of peaſe mixt with beans, having a hook to follow him, no leſs; for they are works in this nature moſt eaſie, and leaſt troubleſome. Mowing.

One man with a Binder may well reap an Acre of Wheat or Rye in a day, if it be principall good and well ſtanding, but if laid or beaten down with weather, then three rood is fully ſufficient for a dayes labour; but if it be thin and upright ſtanding, then he may reap and bind five roods in a day: Of ſmall peaſe, Fetches, and ſuch like, a man may well reap two acres every day. Reaping.

Now forasmuch as it is a cuſtom in divers Countries (and truly it is exceeding profitable and worthy imitation) to ſheaf and bind up both Barley and Oats, as well as Wheat or Rye, and that both ſaveth much Corn, and alſo makes it take a great deal leſs room, and that this labour is to be done after the mowers, as the other was after the reapers, by gathering the Barley, or Oats up without a ſickle or hook, as it lyes in the ſwath, and ſo binding it in ſheafs, you ſhall underſtand, that one man in a day ſhall bind as much as one mower can mow; and if the man be any thing skilfull in the labour, two binders will bind as much as three mowers can mow. Binding of Barley and Oats.

For the gathering or inning of Grain, no man can proportion the number of loads, or quantity of ground, ſhall daily be brought home, ſith the journeyes are uncertain, ſome going Gathering in of Grain.

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a mile, ſome half a mile, and ſome two mile: therefore it is the Husbandmans beſt way, the firſt day to go with his Team himſelf, and both to obſerve the labour and diſtance of place, and by that to compute what may be done after, without hurt to his cattel, and where he fails of any hope, there to make a ſtrict account of the errour; for it is either ignorance or careleſneſs which brings forth miſchances, ſpeaking of husbandry, as over-throwing the Team, over-loading the Team, breaking neceſſary inſtruments, or not reſpecting the wayes and paſſages; any of which may in a day hinder more then half a dayes labour.

Ditching. Again, a man may in a day ditch and quickſet of a reaſonable ditch four foot broad, and three foot deep, a rod or a pole a day; allowing ſixteen feet to the rod, & ſo of large meaſure leſs ground, and of leſs ground larger meaſure, according to the ſufficiency of the fence which you purpoſe to make.

Hedging. A man may hedge alſo in a day, if the hedge be good and ſubſtantial, that is to ſay, five foot high, well bound, thick ſtackt, and cloſe laid, two rod in a day, and if the work be lower or thinner, then double ſo much more according to the former proportion.

Plaſhing. For this plaſhing of hedges, or making a quick fence, if he do it workmanly, and that the growth be high and well grown, and then he lay it thick, cloſe, and ſtrongly bound in the top, turning the quick downward and inward, to plaſh a rod a day, is as much as any man can well do: but if he plaſh it after the weſt-country faſhion, that is, onely cutting it down, and laying it along cloſe to the ground, ſeeking only thickneſs, and not much guard or comlineſs, then he may well plaſh a rod and a half a day without trouble: and ſure in this work is great care and art to be uſed, as well for the preſervation of the quick, as the goodneſs of the fence, being a thing of worth and validity to every Husbandman.

Delving. Again, a man may delve or dig, as for Garden mould, Hempyard, Flax-yard, or for the ſetting of corn, or for levelling of uneven places, one rod in a day, and the ground ſo digged and delved, he may rake, dreſs, and level in the ſame day alſo: but if he dig it deep, and trench it, and manure it, as is meet, either

ther for Garden, Orchard, or corn ſetting, then to delve half a rood in a day, is a very great proportion, becauſe ordinarily to delve, as to receive ordinary ſeeds, requires but one ſpade graft in depth; but extraordinarily to delve, as for inriching and bettering of the ground, and to cleanſe it from ſtones, weeds, and other annoyances, will require two ſpades graft at the leaſt.

Laſtly, a man may thraſh if the corn be good and clean, without ſome extraordinary abuſe or poverty in the grain, in one day four buſhels of wheat or Rye, ſix buſhels of Barly or Oats, and five buſhels of beans or peaſe: but the pulſe muſt then be imagined to be exceeding good, otherwiſe a man ſhall thraſh leſs of it, then of any other kind of grain; for as when it is well loaden, it yieldeth plentifully, ſo when it is poor and lightly loaden, it yieldeth little or nothing, and yet hath not one ſtroke leſs of the flail, nor any labour ſaved, more then belongs to the beſt pulſe whatſoever, being ever at leaſt three times turned, and four times beaten over. Thraſhing.

Having thus generally run over (in a ſhort computation) the labours of the Husbandman, I will now briefly as I can, goe over the particular dayes labour of a Farmer or Plow-man, ſhewing the particular expence of every hour in the day, from his firſt riſing, till his going to bed, as thus for example: we will ſuppoſe it to be after *Chriſtmas*, and about plow-day (which is the firſt ſetting out of the plow) and at what time men either begin to fallow, or to break up Peaſe-earth, which is to lye to bait, according to the cuſtom of the Country; at this time the Plow-man ſhall riſe before four of the clock in the morning, and after thanks given to God for his reſt, & prayer for the ſucceſs of his labours, he ſhall go into his ſtable, or beaſt-houſe, and firſt he ſhall fodder his Cattle, then cleanſe the houſe, and make the booths clean, rub down the cattle, and cleanſe their skins from all filth; then he ſhall curry his Horſes, rub them with cloaths and wiſps, and make both them and the ſtable as clean as may be; then he ſhall water both his Oxen and Horſes, and houſing them again, give them more fodder, and to his Horſe by all means provender; as chaff, and dry peaſe or beans, or Oat-huls, peaſe or beans, or clean Oats, or clean Garbadge (which is the hinder ends of any Grain but Rye) with the ſtraw chopt ſmall amongſt it, accord- The particular expence of a day.

ding as the ability of the Husbandman is.

And whilst they are eating their meat, he shall make ready his Collers, Hames, Treates, Halters, Mullens, and Plowgeares, seeing every thing fit, and in his due place, and to these labours I will also allow full two hours, that is, from four of the clock till six; then he shall come into breakfast, and to that I allow him half an hour, and then another half hour to the gearing and yoaking of his Cattle, so that at seven of the clock he may set forward to his labour, and then he shall plough from seven of the clock in the morning, till betwixt two and three in the afternoon; then he shall unyoak and bring home his Cattle, and having rubb'd them, dresst them, and cleansed away all dirt and filth, he shall fodder them, and give them meat; then shall the servants go into their dinner, which allowed half an hour, it will then be towards four of the clock, at which time he shall go to his cattle again, and rubbing them down, and cleansing their stalls, give them more fodder: which done, he shall go into the Barn, and provide and make ready fodder of all kinds for the next day, whether it be hay, straw, or blend-fodder, according to the ability of the Husbandman.

This being done, and carryed into the stable, ox-house, or other convenient place, he shall then go water his Cattle, and give them more meat, and to his Horse provender, as before is shewed: and by this time it will draw past six of the clock, at what time he shall come into supper, and after supper, he shall either by the fire side mend shooes both for himself and their Family, or beat or knock Hemp or Flax, or pick and stamp Apples or Crabs, for Cyder, or Verdjuyce, or else grind malt on the quernes, pick candle rushes, or do some Husbandly office within doors till it be full eight a clock: Then shall he take his Lanthorn and Candle, and go see his Cattle, and having cleansed the stall and planks, litter them down; look that they be safely tyed, and then fodder, and give them meat for all night; then giving God thanks for benefits received that day, let him and the whole houshold go to their rest till the next morning.

Now it is to be intended, that there may be in the House-

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hold more ſervants then one; and ſo you will demand of me what the reſt of the ſervants ſhall be imployed in, before and after the time of plowing. To this I anſwer, that they may either go into the barn and thraſh, fill or empty the malt fat, load or unload the Kiln, or any other good and neceſſary work that is about the yard; and after they come from plowing, ſome may go into the Barn and thraſh, ſome hedge, ditch, ſtop gaps in broken Fences, digg in the Orchard or Garden, or any other Out-work which is needfull to be done, and which about the Husbandman is never wanting; eſpecially one muſt have a care every night to look to the mending or ſharpening of the Plough-irons, and the repairing of the Plough and Plough-gears, if any be out of order; for to defer them till the morrow, were the loſs of a dayes work, and an ill point of Husbandry.

Particular labours of Cattel.

Now for the particular labours of Cattel, though it be already incluſively ſpoken of in that which is gone before, where I ſhew you how much a man may conveniently plough in a day with one Team or Draught of Cattel; yet for further ſatisfaction you ſhall underſtand, that in your Cattel there are many things to be obſerved, as the kind, the number, and the ſoyl they labour in. For the kind, which are Oxen, Bulls, or Horſes, the beſt for the draught are Oxen, and the reaſons I have ſhewed in my former Works: The next are Horſes, and the worſt, Bulls; becauſe they are moſt troubleſome: the number fit for the plough, is eight, ſix, or four; for the cart, five or four; and for the Waine, never under ſix, except in leading home of harveſt, where loading eaſily, four very good Oxen are ſufficient; for the ſoyl, if it be of the toughеſt and deepeſt earth, eight beaſts can do no more but fallow or break up Peaſe earth, no, nor fewer ſtir, if the ſeaſon grow hard and dry; for ſoyling, winter rigging and ſeed furrow, ſix beaſts may diſpatch that labour: if the ſoyl be mix'd and haſſel, then ſix may fallow and ſow Peaſe, and four do every other ordure: but if it be light and eaſie ſand, then four is enow in every ſeaſon. For the quantity of their work, an Ox-plough may not do ſo much as a Horſe-plough, becauſe they are not ſo ſwift, nor may be driven out of their pace, be-

ing more apt to surfeit then Horses be, so that for an Ox-plough to do an Acre, and a Horse-plow an Acre and a Rood, or an Acre and a half in good ground, is work fully sufficient.

CHAP. XXII.

The applying of Husbandry to the several Countries of this Kingdome, wherein is shewed the office and duty of the Carter or Plow-man.

IT is to be understood, that Husbandry doth vary according to the Nature and Climates of Countries: not one rule observed in all places, but according as the earth, the air, the much or little heat, moisture or cold doth increase or diminish, so must the skilfull Husbandman alter his seasons, labours and instruments; for in stiff Clayes, as are all the fruitful Vales of this Kingdome (of which I have named most part in a Chapter before) as also *Huntington-shire*, *Bedford-shire*, *Cambridge-shire*, and many other of like nature; all manner of arable works must be begun betimes in the year, and the Ploughs and instruments must be of large size, and strong timber, and the labour great and painfull: so also in mixt foyls, that are good and fruitful, as *Northampton-shire*, *Hartford-shire*, most part of *Kent*, *Essex*, *Bark-shire*, and Counties of like nature; all arable toiles would begin at latter seasons, and the Ploughs and Instruments would be of middle size, and indifferent timbers, and the labour somewhat less then the other: but the light sandy grounds which have also a certain natural fruitfulness in them: as in *Norfolk*, *Suffolk*, most part of *Lincoln-shire*, *Hamp-shire*, *Surry*, and Counties of that nature, all arable toiles would begin at the lateſt seasons, and the Ploughs and Instruments would be of the smalleſt and lighteſt size, and of the leaſt timber, and the labour of all other is easieſt.

Lastly, for the barren unfruitfull earth (of which only I have written in this Book (as in *Devonshire*, *Cornwall*, many parts of *Wales*, *Darbyshire*, *Lancashire*, *Cheshire*, *Yorkshire*, and many other like, or worse than they: the arable toils would have a fit season of the year, according to the temperateness of the year, which if it happen early, then you must begin your labours at latter

ter seasons, and for your Plough and instruments, they must not keep any certain proportion, but be framed ever according to the ground, the stronger and stiffer ground having ever the strong and large Plough, with Instruments of like kind, and the lighter earth a Plow and Instruments of more easie substance: as for the labour, it must be such, and no other, then that which hath been already declared in this book.

The Carter's office.

And hence it comes, that the office and duty of every skilfull Plough-man, or Carter, is, first to look to the nature of the earth, next to the seasons of the year, then to the customs and fashions of the place wherein he liveth; which customs, although they be held as second natures amongst us, and that the best reasons of the best work-men commonly are, that thus I do, because thus they do; yet would I wish no man to bind himself more strictly to custom, then the discourse of reason shall be his warrant, and as I would not have him to prejudicate in his own opinion, so I would not have him too great a slave to other mens tradition, but standing upon the ground of reason, made good by experience, I would ever have him profit in his own judgement.

Now the further office and duty of the Husbandman, is, with great care and diligence, to respect in what sort of fashion to plough his ground; for although I have in the former Chapter shewed how he should lay his furrows, what depth he shall plow them, and how he shall be able to raise and gain the greatest store of mould; yet is there also another consideration to be had, no less profitable to the Husbandman then any of the former; and that is, how to lay your Land best for your own profit and ease, as also the ease of your Cattel which shall draw within your draught as thus for instance: If your arable Land shall lye against the side of any steep hill (as for the most part all barren earths do) if then you shall plow such Land directly against the hill, beginning below, and so ascending streight upright, and so down again, and up again, this very labour and toyling against the hill will breed such a bitter weariſomness to the cattel, and such a discouragement, that you shall not be able to compass one half part of your labour, besides the danger of over-heating and surfeiting of your beasts, whence will spring many

many mortal diſeaſes: Therefore when you ſhall plough any ſuch ground, be ſure ever to plough it ſide-wayes over-thwart the hill, where your beaſts may tread on the level ground, and never directly up and down, ſo ſhall the compoſt and manure which you lay upon the ground not be ſo ſoon waſh'd away from the upper part of the ground, becauſe the furrows not lying ſtreight down in an even deſcent, but turned croſs-wayes upward againſt the hill, it muſt neceſſarily hold the ſoyl within it, and not let it waſh away.

Of Cattel for draught.

Again, it is the office of every good plow-man to know what Cattel are meeteſt for his draught, as whether Oxen or Horſe, or both Oxen and Horſe: wherein is to be underſtood, that although of all draughts whatſoever within this Kingdome, there is none ſo good to plow withall, both in reſpect of the ſtrength, ſtability, indurance, and fitneſs for labour, as the Oxen are; in whom there is ſeldome or never any loſs: becauſe whenſoever his ſervice faileth in the draught, his fleſh will be of good price in the ſhambles; yet notwithſtanding, in this caſe a man muſt neceſſarily bind himſelf much to the cuſtom of the Country, and faſhion of his neighbours; for if you ſhall live in a place where fuel is ſcarce and far to be fetch'd, as commonly it is in all barren Countries, which, for the moſt part are ſtony Champains, or cold mountains; and your neighbours, as well for the ſpeed of their journies, as for length, keep Horſe-draughts: in this caſe alſo you muſt do the like, or elſe you ſhall want their Company in your journey, which is both diſcomfort and diſprofit, if any miſchance or caſualty ſhall happen, or being inforc'd to drive your Oxen as faſt as they do their Horſe, you ſhall not onely over-heat, tire, bruiſe, and ſpoyl them, but alſo make them utterly unfit either for feeding or labour and therefore if your Eſtate be mean, and that you have no more but what neceſſity requires, then you ſhall ſort your Plow or Team according to the faſhion of your Country, and the uſe of your neighbours: but if God have bleſt you with plenty, then it ſhall not be amiſs for you to have ever an Ox-draught or two, to till you Land; and a Horſe-draught to do all your forraign abroad buſineſſes: ſo ſhall your work at home ever go conſtantly forward, and your outward neceſſary Proviſions be never wanting. Now for

for the mixture of Oxen and Horſes together, it falleth out oftentimes that the Plow-man of force muſt be provided with Cattle of both kind, as if he happen to live in a rocky Country, where the ſteepineſs of the hils, and narrowneſs of the wayes, will neither ſuffer Cart, Wain, nor Tumbrel to paſs; in this caſe you ſhall keep Oxen for the plow, to till the ground with, and Horſes to carry pots and hooks: the firſt to carry forth your manure, and the other to bring home your hay and Corn harveſt, your fuel and other proviſions, which are needfull for your family, as they do both in *Cornwal*, and other mountainous Countries, where Carts and Wains, and ſuch like draught, have no poſſible paſſage.

Again, it is the office and duty of every good Plow-man to know his ſeveral labours, for every ſeveral month through the whole year, whereby no day nor hour may be miſpent, but every time and ſeaſon employed according as his nature requireth: as thus for example.

In the month of *January*, the painfull Plow-man, if he live in fertile and good ſoyles, as among rich, ſimple clayes, he ſhall firſt plow up his Peaſe earth, becauſe it muſt lye to take bait before it be ſown; but if he live in fruitful, well mixt ſoyles, then in this month he ſhall begin to fallow the field he will lay to reſt the year following: but if he live upon hard barren earths (of which chiefly I write) then in this month he ſhall water his meadows & paſture grounds, and he ſhall drain and make dry his arable grounds, eſpecially where he intends to ſow Peaſe, Oats, or Barley the ſeed time following. Alſo he ſhall ſtub up all ſuch rough grounds as he intends to ſow the year following. You ſhall meaſure and trim up your Garden moulds, and you ſhall comfort with manure, ſand, or lime, or all three mixt together, the roots of all barren fruit-trees; and alſo cut down all ſuch timber, only there will be loſs in the bark, for the time is ſomewhat too early for it to riſe. Laſtly, you may tranſplant all manner of Fruit-trees, the weather being open, and the ground eaſie; you may rear Calves, remove Bees, and for your own health keep your body warm, let good dyet and wholſome be your Phyſician, and rather with excerciſe then ſawce encreaſe your appetite. January.

In

February. In the month of *February*, either ſet or ſow all ſorts of Beans, Peaſe, and other Pulſe, and the ſtiffer your ground is, the ſooner begin your work; prepare your Garden-mould, and make it eaſie and tender; prune and trim all ſorts of Fruit-trees, from moſs, cankers, and all ſuperfluous branches; plaſh your hedges, and lay your quick-ſets cloſe and intire together; plant Roſes, Gooſe-berries, and any fruit that grows upon little buſhes; graft at the latter end of this month upon young and tender ſtocks, but by all means overlade not the ſtocks.

Laſtly, for your health, take heed of cold, forbear meats that are ſlimy and phlegmatick, and if need require, either purge, bathe, or bleed, as Art ſhall direct you.

March. In the month of *March*, make an end of ſowing of all ſorts of ſmall Pulſe, and begin to ſow Oats, Barley, and Rye, which is called March-rye; graft all ſorts of Fruit-trees, and with young Plants and Syens repleniſh your Nurſery; cover the roots of all trees that are bared, and with fat earth lay them cloſe and warm: if any Tree do grow barren, bore holes in the root, and drive hard wedges or pins of Oak-wood therein, and that will bring fruitfulneſs; tranſplant all ſorts of ſummer flowers, and give new comfort of manure and earth to all early out-landiſh flowers, eſpecially to the *Grown Emperial Tulips*, *Hyacinth*, and *Narciſſus* of all ſhapes and colours; cut down under-wood, for fuel and fencing, and look well to your Ewes, for then is the principal time of yeaning.

And laſtly, bathe often, and bleed but upon extremity, purge not without good counſel, and let your dyet be cool and temperate.

April. In the month of *April*, finiſh up all your Barly-ſeed, and begin to ſow your Hemp and Flax: ſow your Garden-ſeeds, and plant all ſorts of herbs; finiſh grafting in the ſtock, but begin your principal inoculation, for then the Rind is moſt plyant and gentle; open your Hives, and give bees free liberty, and leave to ſuccour them with food, and let them labour for their living.

Now cut down all great Oak-timber, for now the bark will riſe, and be in ſeaſon for the Tanners; now ſcour your ditches, and gather ſuch manure as you make in the ſtreets and high-wayes, into great heaps together; lay your meadows, ſleight your corn-

corn-ground, gather away ſtones, repair your high-wayes, Set Oziers and Willows, and caſt up the banks and mines of all decayed fences.

Laſtly, for your health, either purge, bathe, or bleed, as you ſhall have occaſion, and uſe all wholſome recreation: for than moderate exerciſe in this month, there is no better Phyſick.

In the month of *May*, ſow Barley upon all light ſands and burning grounds, ſo likewiſe do your Hemp, or Flax, and alſo all ſorts of tender garden ſeeds, as are Cucumbers, and Mellons, and all kind of ſweet ſmelling herbs and flowers; Fallow your ſtiff clays, ſummer ſtir your mixt earth, and foyl all light and looſe hot ſands; prepare all barren earth for Wheat and Rye, burn bait, ſtub Gorſs or Furs, and root out Broom and Fern; begin to fold your ſheep, lead forth manure, and bring home fuell and fencing; weed your winter corn, follow your common works, and put all ſorts of graſs either in paſture or teather; put your Mares to the Horſe, let nothing be wanting to furniſh the Dairy; and now put off all your Winter fed Cattel, for now they are ſcarceſt and deareſt; put young ſtears and dry kine now to feed at freſh graſs, and away with all peaſe-fed ſheep; for the ſweetneſs of graſs mutton will pull down their prices. May.

Laſtly, for your health, uſe drink that will cool and purge the blood, and all other ſuch phyſical precepts, as true Art ſhall preſcribe you: but beware of Mountebanks, and old wives tales, the latter hath no ground, and the other no truth, but apparent coſenage.

In the month of *June*, carry ſand, marl, lime, and manure of what kind ſoever to your land; bring home your coals and other neceſſary fuel fetcht far off; ſhear early fat ſheep, ſow all ſorts of tender herbs, cut rank low meadows, make the firſt return of your fat cattel, gather early ſummer fruits, diſtil all ſorts of plants and herbs whatſoever. June.

And laſtly, for your health, uſe much exerciſe, thin dyet, and chaſt thoughts.

In the month of *July*, apply your hay harveſt; for a day ſlacke is many pounds loſt; chiefly, when the weather is uncon- July.

ſtant, ſhear all manner of field-ſheep, Summer-ſtir rich ſtiff grounds, ſoyl all mixt earths, and latter ſoyl all looſe hot ſands. Let herbs you would preſerve, now run to ſeed; cut off the ſtalks of out-landiſh-flowers, and cover the roots with new earth, ſo well mixt with manure as may be; ſell all ſuch Lambs as you feed for the butcher, and ſtill lead forth ſand, marl, lime, and other manure; fence up your copſes, graze your elder under-woods, and bring home all your field-timber.

And laſtly, for your health, abſtain from all phyſick, bleed not but upon violent occaſion, and neither meddle with Wine, Women, nor other wantonneſs.

Auguſt. In the month of *Auguſt*, apply your Corn Harveſt, ſhear down your Wheat and Rye, mow your Barley and Oats, and make the ſecond return of your fat ſheep and cattle; gather all your Summer greater fruit, Plums, Apples, and Pears; in Summer make your ſweet-perry, and Cyder; Set ſlips, and ſyens of all ſorts of Gilly-flowers, and other flowers, and tranſplant them that were ſet the ſpring before, and at the end of this month begin to winter rig all fruitfull ſoyls whatſoever. Geld your lambs, carry manure from your dove-coats, and put your ſwine to the early or firſt maſt. And laſtly, for your health, ſhun feaſts and banquets. Let phyſick alone, hate wine, and onely take delight in drinks that are cool and temperate.

September. In the month of *September*, reap your peaſe, beans, and all other pulſe, making a final end of your harveſt; now beſtow upon your wheat Land your principal manure, and now ſow your Wheat and Rye, both in rich and in barren climates; now put your ſwine to maſt, of all hands, gather your winter fruit, and make ſale of your wool, and other ſummer commodities; now put off thoſe ſtocks of bees, you mean to ſell, or take for your own uſe, cloſe thatch and daub warm all the ſurviving hives, and look that no Drone, Mice, or other Vermine be in or about them; now thatch your ſtacks and reeks, thraſh your ſeed Rye and Wheat, and make an end with your cart of all forraign journeys.

Laſtly, for your health, in this month, uſe phyſick, but moderately; forbear fruits that are too pleaſant or rotten, and, as death, ſhun ryot and ſurfeit.

In

In the month of *October*, finish your wheat-seed, and scour ditches and ponds, plash and lay hedges and quickset, transplant, remove or Set all manner of fruit-trees, of what nature or quality soever; make your Winter Cider and Perry, spare your private pastures, and eat up your corn-fields and commons; and now make an end of winter ridging, draw furrows to drain, and keep dry your new sown corn; follow hard the making of your malt, rear all such calves as shall fall, and wean those foals from your draught mares, which the spring before were foaled: now sell all such sheep as you will not winter, give over folding, and separate Lambs from the Ewes, which you purpose to keep for your own stock. October.

Lastly, for your health, refuse not any needfull physick at the hands of the learned physitian, use all moderate sports, for any thing now is good, which reviveth the spirits.

In the month of *November*, you may sow either Wheat or Rye in exceeding hot soyls, you may then remove all sorts of fruit-trees, and plant greet trees either for shelter or shadow: now cut down all sorts of Timber, for plows, carts, axeltrees, naves, harrows, and other husbandly offices; make now the last return of your grass fed cattle, bring your swine from the mast, and feed them for slaughter, rear what calves soever fall, and break up all such Hemp and Flax, as you intend to spin in the winter season. November.

Lastly, for your health, eat good wholsome and strong meats, very well spiced and drest, free from rawness; drink sweet wines, and for digestion ever before cheese, prefer good and moderate exercise.

In the month of *December*, put your sheep and swine to the pease Reeks, and fat them for the slaughter and market; now kill your small porks, and large bacons, lop hedges and trees, saw out your timber for building, and lay it to season; and if your land be exceeding stiff, and rise up in an extraordinary furrow, then in this month begin to plow up that ground whereon you mean to sow clean beans only; now cover your dainty fruit trees over with canvase, and hide all your best flowres from frost and stormes, with rotten old horse-litter; now drain all your corn-fields, and as occasion shall serve, so water and keep moist December.

your meadows; now become the fowler, with Piece, Nets, and all manner of Engines, for in this month no fowl is out of season; now fish for the Carp, the Bream, Pike, Tench, Barbel, Peal and Salmon.

And lastly, for your health, eat meats that are hot and nourishing, drink good wine that is neat, sprightly and lusty, keep thy body well clad, and thy house warm, forsake whatsoever is flegmatick, and banish all care from thy heart, for nothing is more unwholsome then a troubled spirit.

Many other observations belong unto the office of our skilfull Plow-man or Farmer; but since, they may be imagined too curious, too needless, or too tedious, I will stay my pen with these already rehearsed, and think to have written sufficiently, touching the application of grounds, and office of the Plow-man.

The end of Markham's *farewell to Husbandry.*

The

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An excellent way to take Moles, and to preserve good Ground from such annoyance.

PUt Garlick, Onions, or Leeks, into the mouths of the holes, and they will come out quickly, asamazed.

FINIS.

A NEW

ORCHARD AND GARDEN:

OR,

The best way for Planting, Graffing, and to make any Ground good for a rich Orchard: Particularly in the North, and Generally for the whole Common-wealth, as in Nature, Reason, Situation, and all Probability, may and doth appear.

With the Country Housewifes Garden for Herbs of Common use. Their Virtues, Seasons, Profits, Ornaments, variety of Knots, Models for Trees, and Plots, for the best ordering of Grounds and Walks.

AS ALSO

The Husbandry of Bees, with their several Uses and Annoyances:

All being the experience of Forty and eight years Labour, and now the fifth time Corrected, and much Enlarged. By William Lawson.

Whereunto is newly added the Art of Propagating Plants, with the true Ordering of all manner of Fruits, in their Gathering, Carrying home, and Preservation.

Skil and pains, bring fruitful gains.

Nemo sibi natus.

London, Printed for *George Sawbridge*. 1668.

To the Right Worſhipfull

Sir *HENRY BELLOSES*,

Knight and Baronet.

Worthy Sir,

WHen in many years by long experience I had furniſhed this my Northern Orchard and Country-Garden with needfull Plants and uſefull herbs, I did impart the view thereof to my Friends, who reſorted to me to confer in matters of that nature; they did ſee it, and ſeeing it, deſired it; and I muſt not deny now the publiſhing of it, (which then I allotted to my private delight) for the publick profit of others. Wherefore, though I could plead Cuſtom, the ordinary excuſe of all writers, to chuſe a Patron and Protector of their works, and ſo ſhroud my ſelf from ſcandall under your ho-

nourable favour, yet have I certain reasons to excuse this my presumption: First, the many courtesies you have vouchsafed me. Secondly, your delightfull skill in matters of this nature. Thirdly, the profit which I received from your learned discourse of Fruit-trees. Fourthly, your animating and assisting of others to such indeavours. Last of all, the rare work of your own in this kind; all which to publish under your protection, I have adventured (as you see.) Vouchsafe it therefore entertainment, I pray you, and I hope you shall find it not the unprofitablest servant of your retinue; for when your serious employments are over-passed, it may interpose some commodity, and raise you contentment out of variety.

Your Worships

most Bounden,

WILLIAM LAWSON.

THE

PREFACE,

To all Well-minded.

ART hath her first original out of Experience, which therefore is called The School-Mistriss of fools, because she teacheth infallibly, and plainly, as drawing her knowledge out of the course of Nature, (which never fails in the general) by the senses, feelingly apprehending, and comparing, (which the help of the Mind) the Works of Nature; and as in all other things naturall, so especially in Trees. For what is Art more than a provident and skilfull Correctrix of the faults of Nature in particular works, apprehended by the Senses? As when good ground naturally brings forth Thistles, trees stand too thick, or too thin, or disorderly, or (without dressing) put forth unprofitable Suckers, and such like; all which, and a thousand more, Art reformeth, being taught by Experience; and therefore must we count that art the surest, that stands upon Experimental Rules, gathered by the Rule of Reason, (not conceit) of all other Rules the surest.

Whereupon have I, of my meer and sole Experience, without respect to any former written Treatise, gathered these Rules, and set them down in writing, not daring to hide the least talent given me of my Lord and Master in Heaven. Neither is this injurious to any, though it differ from the Common opinion in divers points, to make it known to others, what good I have found out, in this faculty by long tryal and experience. I confess freely my want of curious skill in the art of planting: and I admire and praise Plinie, Aristotle, Virgil, Cicero, and many

many others, for wit and judgment in this kind, and leave them to their times, manner, and several Countries.

I am not determined (neither can I worthily) to set forth the praises of this art; how some, and not a few, even of the best, have accounted it a chief part of earthly happiness, to have fair and pleasant Orchards, as in Hesperia *and* Thessaly; *how all with one consent agree, that it is a chief part of Husbandry,* (as Tully de Senectute) *and Husbandry maintains the world: how antient, how profitable, how pleasant it is; how many secrets of nature it doth contain, how loved, how much practised in the best places, and of the best. This hath been done by many: I only aim at the common good. I delight not in curious conceits, as planting and graffing with the Roots upwards, inoculating Roses on Thorns, and such like; although I have heard of divers, proved some, and read of more.*

The Stationer hath (as being most desirous with me, to further the common good) bestowed much cost and care in having the Knots and Models by the best Artizan cut in great variety, that nothing might be any way wanting to satisfie the curious desire of those that would make use of this Book.

And I shew a plain and sure way of planting, which I have found good by 48 *years (and more) experience in the North part of* England. *I prejudicate and envy none; wishing yet all to abstain from maligning that good (to them unknown) which is well intended. Farewell.*

Thine for thy good,

W. L.

THE

The beſt, ſure, and readieſt way to make a good ORCHARD *and* GARDEN.

CHAP. I.

Of the Gardener, and his Wages.

WHoſoever deſireth and indeavoureth to have a pleaſant and profitable Orchard, muſt (if he be able) provide himſelf of a fruiterer, Religious, Honeſt, Skilfull in that faculty, and therewithall painfull. By Religious I mean (becauſe many think Religion but a Faſhion or Cuſtom to go to Church) maintaining, and cheriſhing things religious: as Shools of Learning, Churches, Tythes, Church goods and rights, and above all things, Gods word, and the Preachers thereof, ſo much as he is able, practiſing prayers, comfortable conferences, mutual inſtruction to edifie, almes, and other works of charity, and all out of a good conſcience. Religious.

Honeſty in a Gardener, will grace your Garden, and all your houſe, and help to ſtay unbridled Serving men, giving offence to none, nor calling your Name into Queſtion by diſhoneſt acts, nor infecting your family by evil counſel or example. For there is no plague ſo infectious as popery and knavery, he will not purloin your profit, nor hinder your pleaſures. Honeſt.

Concerning his skill, he muſt not be a Scioliſt, to make a ſhew or take in hand that which he cannot perform, eſpecially in ſo weighty a thing as an Orchard: than the which there can be no human thing more excellent, either for pleaſure or profit, as ſhall (God willing) be proved in the treatiſe following. And what an hindrance ſhall it be, not onely to the owner, but to the com- Skilfull.

mon

mon good, that the unspeakable benefit of many hundred years shall be lost, by the audacious attempt of an unskilful Arborist?

Painful. The Gardener had not need be an idle or lazie Lubber, for so your Orchard, being a matter of such moment, will not prosper, there will ever be something to do. Weeds are alwayes growing, the great mother of all living Creatures, the Earth, is full of seed in her bowels, and any stirring gives them heat of Sun, and being laid neer day, they grow: Moles work daily, though not alwayes alike: Winter herbs at all times will grow (except in extreme frost). In winter your trees and herbs would be lightned of Snow, and your allies cleansed: drifts of Snow will set Deer, Hares, and Conies, and other noysome beasts, over your walls and hedges into your Orchard. When Summer cloaths your borders with green and speckled colours, your Gardener must dress his hedges, and antick works; watch his Bees, and hive them: Distil his Roses and other Herbs. Now begin Summer fruits to ripen, and crave your hand to pull them. If he have a Garden (as he must needs) to keep, you must needs allow him good help, to end his labours which are endless; for no one man is sufficient for these things.

Wages. Such a Gardener as will conscionably, quietly, and patiently travel in your Orchard, God shall Crown the labours of his hands with joyfulness, and make the clouds drop fatness upon your trees; he will provoke your love, and earn his wages and fees belonging to his place. The house being served, fallen fruit, superfluity of herbs, and flowers, seed, graffs, Sets, and besides all other of that fruit which your bountifull hand shall reward him withall, will much augment his wages, and the profit of your Bees will pay you back again.

If you be not able, nor willing to hire a Gardener, keep your profits to your self, but then you must take all the pains; and for that purpose (if you want this faculty) to instruct you, have I undertaken these labours, and gathered these Rules, but chiefly respecting my Countries good.

CHAP.

CHAP. II.
Of the Soyl.

FRuit-trees moſt common, and meeteſt for our Northern Countries: (as Apples, Pears, Cherries, Filbirds, Red and White, Plummes, Damſons, Bullis,) for we meddle not with Apricocks nor Peaches, nor ſcarcely with Quinces, which will not like in our cold parts, unleſs they be helped with ſome reflect of the Sun or other like means, nor with buſhes bearing berries, as Barberries, Gooſe-berries or Groſers, Raſpe-berries, and ſuch like, though the Barbery be wholſome, and the Tree may be made great; do require (as all other Trees do) a black, fat, mellow, clean and well tempered ſoyl, wherein they may gather plenty of good ſap. Some think the Haſel would have a chanily rock, and the ſallow, and elder, a wateriſh mariſh. The ſoyl is made better by delving, and other means, being well melted, and the wildneſs of the earth and weeds (for every thing ſubject to man, and ſerving his uſe, (not well ordered) is by nature ſubject to the curſe,) is killed by froſt and drought, by fallowing and laying on heaps, and if it be wild earth, with burning. Kinds of trees. Soyl.

If your ground be barren (for ſome are forced to make an Orchard of barren ground) make a pit three quarters deep, and two yards wide, and round in ſuch places where you would ſet your trees, and fill the ſame with fat, pure, and mellow earth, one whole foot higher than your ſoyl, and therein ſet your plant. For who is able to manure a whole Orchard plot, if it be barren? But if you determine to manure the whole ſite, this is your way; dig a trench half a yard deep, all along the lower, (if there be a lower ſide of your Orchard plot,) caſting up all the earth on the inner ſide, and fill the ſame with good, ſhort, hot, and tender muck; and make ſuch another trench, and fill the ſame as the firſt, and ſo the third, and ſo throughout your ground; and by this means your plot ſhall be fertile for your life. But be ſure you ſet your Trees neither in dung, nor barren earth. Barren earth.

Your ground muſt be plain, that it may receive, and keep moiſture, not onely the rain falling thereon, but alſo water caſt upon it, or deſending from higher ground by ſluces, Conduits, Plain.

&c. For I account moisture in summer very needfull in the soyl of trees, and drought in winter, provided that the ground be neither boggy, nor the inundation be past 24 hours at any time, and but twice in the whole Summer, and so oft in the Winter. Therefore if your plot be in a bank, or have a descent, make trenches by degrees, allyes, walks, and such like, so as the water may be stayed from passage; and if too much water be any hindrance to your walks, (for dry walks do well become an Orchard, and an Orchard them) raise your walks with earth first, and then with stones as big as wall-nuts, and lastly, with gravel. In Summer you need not doubt too much water from heaven, either to hurt the health of your body, or your trees. And if over-flowing molest you, after one day, avoid it then by deep trenching.

Moist.

Some for this purpose dig the soyl of their Orchards, to receive moisture, which I cannot approve: for the roots with digging are oftentimes hurt, and especially being digged by some unskilful servant; for the Gardener cannot do all himself: And moreover, the Roots of Apples and Peares, being laid neer day, with the heat of the Sun, will put forth suckers, which are a great hinderance, and sometimes with evil guiding, the destruction of trees, unless the delving be very shallow, and the ground laid very level again. Cherries and Plums, without delving, will hardly or never (after twenty years) be kept from such suckers, nor Asps.

Grass.

Grass also is thought needfull for moisture, so you let it not touch the Roots of your trees; for it will breed moss; and the boal of your tree neer the earth, would have the comfort of the Sun and Air.

Some take their ground to be too moist, when it is not so, by reason of water standing thereon; for except in sowre marshes, springs, and continual over-flowings, no earth can be too moist. Sandy, and fat earth, will avoid all water falling, by receit: indeed a stiff clay will not receive the water, and therefore if it be grassie, or plain, especially hollow, the water will abide, and it will seem wateriſh, when the fault is in the want of manuring, and other good dressing.

This plainness, which we require, had need be natural, because to force any uneven ground, will destroy the fatness: for every soyl

soyl hath his crust next day, wherein trees and herbs put their roots, and whence they draw their sap, which is the best of the soyl, and made fertil with heat and cold, moisture and drought, and under which, by reason of the want of the said temperature, by the said four qualities, no tree nor herb (in a manner) will or can put root; as may be seen, if in digging your ground, you take the weeds of most growth, as grass, or docks, (which will grow, though they lye upon the earth bare,) yet bury them under the crust, and they will sooner dye and perish, and become manure to your ground. This crust is not past 15 or 18 inches deep in good ground, or other grounds less. Hereby appears the fault of forced plains, *viz.* your crust in the lower parts is covered with the crust of the higher parts, and both with worse earth: your heights having the crust taken away, are become meerly barren; so that either you must force a new crust, or have an evil soyl. And be sure you level before you plant, lest you be forced to remove, or hurt your plants by digging, and casting among their roots. Your ground must be cleered, as much as you may, of stones and gravel, walls, hedges, bushes, and other weeds.

Naturally plain.

Crust of the earth.

CHAP. III.
Of the Site.

THere is no difference, that I find, betwixt the necessity of a good soyl, and a good Site of an Orchard: For a good soil (as is before described) cannot want a good Site; and if it do, the fruit cannot be good; and a good Site will much amend an evil soyl. The best Site is in low grounds, and (if you can) neer unto a River. High grounds are not naturally fat.

Low and neer a River.

And if they have any fatness by man's hand, the very descent in time doth wash it away. 'Tis with grounds in this case, as it is with men in a common wealth: Much will have more; and, Once Poor, seldome or never Rich. The Rain will scind and wash, and the wind will blow fatness from the heights to the hollows, where it will abide and fatten the earth, though it were barren before.

Hence it is, that we have seldome any plain grounds, and low, a barren, and as seldome any heights naturally fertile. It is

unspeakable, what fatness is brought to low grounds by inundations of waters; neither did I ever know any barren ground in a low plain by a River side. The goodness of the soyl in *Howle* or *Hollowderness* in *York-shire*, is well known to all that know the River *Humber*, and the huge bulks of their Cattel there. By estimation of those that have seen the low grounds in *Holland* and *Zealand*, they far surpass most Countries in *Europe* for fruitfulness, and onely because they lye so low. The world cannot compare with *Egypt* for fertility, so far as *Nilus* doth overflow his banks: So that a fitter place cannot be chosen for an Orchard, then a low plain by a River side. For besides the fatness which the water brings, if any cloudy mist or rain be stirring, it commonly falls down to, and follows the course of the River. And where see we greater Trees of bulk and bough, then standing on, or neer the water side? If you ask why the plains in *Holderness*, and such Countries, are distitute of wood? I answer, that men and cattel (that have put trees thence, from out of plains to void corners) are better than trees. Neither are those places without trees. Our old Fathers can tell us how woods are decayed, and people in the room of trees multiplyed. I have stood somewhat long in this point, because some do condemn a moist soyl for fruit-trees.

Psal. 1. 3.
Ezek. 17. 8.
Ecclus. 39. 17.
Mr. *Markham.*

Winds. Chap. 13.

A low ground is good to avoid the danger of winds, both for shaking down your unripe fruit. Trees (the most that I know) being loaden with wood for want of proyning, and growing high by the unskilfulness of the Arborist, must needs be in continual danger of the South-West, West and North-west winds, especially in *September* and *March*, when the air is most temperate from extreme heat and cold, which are deadly enemies to great winds. Wherefore, chuse your ground low: Or if you be forced to plant in a higher ground, let high and strong walls, houses and trees, as Wall-nuts, Plane-trees, Oaks and Ashes, placed in good order, be your fence for winds.

The sucken of your dwelling house, descending into your Orchard, if it be cleanly conveyed, is good.

Sun.

The Sun, in some sort, is the life of the world: it maketh proud growth, and ripens kindly and speedily, according to the golden Tearm, *Annus fructificat, non tellus.* Therefore, in the Countries

Countries neerer approaching the Zodiack, the Suns habitation, they have better, and sooner ripe fruit, then we that dwel in these frozen parts.

This provoketh most of our great Arborists to plant Apricocks, Cherries, and Peaches, by a wall, and with tacks, and other means to spread them upon, and fasten them to a wall, to have the benefit of the immoderate reflex of the Sun, which is commendable, for the having of fair, good, and soon ripe fruit. But let them know, it is more hurtfull to the trees than the benefit they reap thereby, as not suffering a tree to live the tenth part of his age; it helps Gardeners to work. For first, the wall hinders the roots; because into a dry and hard wall of earth or stone, a tree will not, nor cannot put any root to profit, but especially it stops the passage of the sap, whereby the bark is wounded, and the wood and diseases grow, so that the tree becomes short of life. For as in the body of man, the leaning or lying on some member, whereby the course of blood is stopt, makes that member as it were dead for the time, till the blood return to his course, and I think, if that stopping should continue any time, the member will perish for want of blood, (for the life is in the blood) and so indanger the body; so the sap is the life of the tree, as the blood is to mans body: neither doth the tree in winter (as is supposed) want his sap, no more than mans body his blood, which in winter, and time of sleep, draws inward: so that the dead time of winter, to a tree, is but a night of rest: for the tree at all times, even in winter, is nourish'd with sap and growth as well as mans body. The chilling cold may well some little time stay or hinder the proud course of the sap, but so little and so short a time, that in calm and mild seasons, even in the depth of winter, if you mark it, you may easily perceive the sap to put out, and your trees to increase their buds which were formed in the Summer before, and may easily be discerned; for leaves fall not off, till they be thrust off with the knots or buds, whereupon it comes to pass, that trees cannot bear fruit plentifully two years together, and make themselves ready to blossom against the seasonableness of the next spring. Trees against a wall.

And if any frost be so extreme, that it stay the sap too much, or too long, then it kills the forward fruit in the bud, and sometimes

times the tender leaves and twigs, but not the tree: Wherefore to return, it is perilous to ſtop the ſap. And where, or when did you ever ſee a great tree packt on a wall? Nay, who did ever know a tree ſo unkindly ſplat, come to age? I have heard of ſome that out of their imaginary cunning, have planted ſuch trees on the North ſide of the wall, to avoid drought: but the heat of the Sun is as comfortable (which they ſhould have regarded) as the drought is hurtfull. And although water is a ſovereign remedy againſt drought, yet want of Sun is no way to be helped. Wherefore, to conclude this Chapter, let your ground lye ſo, that it may have the benefit of the South and weſt Sun, and ſo low and cloſe, that it may have moiſture, and increaſe his fatneſs, (for trees are the greateſt ſuckers and pillers of the earth) and (as much as may be) free from great winds.

CHAP. IV.
Of the Quantity.

IT would be remembred what a benefit riſeth, not onely to every particular owner of an Orchard, but alſo to the commonwealth by fruit, as ſhall be ſhewed in the ſixteenth Chapter (God willing); whereupon muſt needs follow, the greater the Orchard is (being good, and well kept) the better it is: for of good things, being equally good, the biggeſt is the beſt. And if it ſhall appear, that no ground a man occupieth, (no, not the Corn-field) yieldeth more gain to the purſe, and houſe-keeping (not to ſpeak of the unſpeakable pleaſure) quantity for quantity, then a good Orchard, (beſides, the coſt in planting and dreſſing an Orchard is not ſo much by far, as the labour and Seeding of your Corn-fields, nor for durance of time comparable, beſides the certainty of the one before the other) I ſee not how any labour or coſt in this kind, can be idely or waſtfully beſtowed, or thought too much. And what other thing is a Vineyard, in thoſe Countries where Vines do thrive, then a large Orchard of trees bearing fruit; or what difference is there in the juyce of the Grape, and our Syder and Perry, but the goodneſs of the ſoyl, and clime where they grow? which maketh the one more ripe, and ſo more pleaſant than the other. Whatſoever can be ſaid for the

Orchard as good as a Corn-field.

Compared with a Vineyard.

the benefit rising from an Orchard, that makes for the largeness of the Orchard bounds. And me-thinks they do preposterously, that bestow most cost and labour, and more ground in and upon a Garden, then upon an Orchard, whence they reap and may reap both more pleasure and more profit, by infinite degrees. And further, that a Garden never so fresh, and fair, and well kept, cannot continue without both renewing of the earth and the herbs often, in the short and ordinary age of a man: whereas your Orchard well kept, shall dure divers hundred years, as shall be shewed Chapter 14. In a large Orchard there is much labour saved, in fencing and otherwise: for three little Orchards or a few trees, being in a manner all out-sides, are so blasted and dangered, and commonly in keeping neglected, and require a great fence; whereas in a great Orchard, trees are a mutual fence one to another, and the keeping is regarded; and less fencing serves six acres together, then three in several inclosures.

Compared with a Garden.

Now what quantity of ground is meetest for an Orchard, can no man prescribe, but that must be left to every mans several judgment, to be measured according to his ability and will; for other necessaries besides fruit must be had, and some are more delighted with Orchards than others.

What quantity of ground.

Let no man, having a fit plot, plead poverty in this case; for an Orchard once planted, will maintain it self, and yield infinite profit beside. And I am perswaded, that if men did know the right and best way of planting, dressing, and keeping trees, and felt the profit and pleasure thereof, both they that have no Orchards, would have them, and they that have Orchards would have them larger, yea, fruit-trees in their hedges, as in *Worcester-shire*, &c. And I think the want of planting is a great loss to our Common-wealth, and in particular, to the owners of Lordships, which Landlords themselves might easily amend, by granting longer time and better assurance to their Tenants, who have taken up this Proverb, *Botch and sit, Build and flit*: for who will build or plant for another mans profit? Or the Parliament might enjoyn every occupier of grounds to plant and maintain for so many acres of fruitfull ground, so many several trees, or kinds of trees for fruit. Thus much for quantity.

What is no hindrance.

How Landlords by their Tenants may make flourishing Orchards in *England*.

CHAP.

A. All theſe ſquares muſt be ſet with Trees, the Garden and other Ornaments muſt ſtand in ſpaces betwixt the trees, and in the borders and fences.

B. Trees twenty yards aſunder.
C. Garden Knots.

D. Kitching Garden
E. Bridge,
F. Conduit.
G. Staires.

H. Walks ſet with great wood thick.
I. Walks ſet with great wood, round about your Orchard.

K. The Out fence.
L. The Out fence ſet with ſtone-fruit.

M. Mount. To force earth for a Mount or ſuch like, ſet it round with quick, and lay boughes of trees ſtrangely intermingl'd, the top inward, with the earth in the middle.

N. Still-houſe.
O. Good ſtanding for Bees, if you have an houſe.

P. If the River run by your door, and under your Mount it will be pleaſant.

CHAP. V.
Of the Form.

THe goodneſs of the ſoil and ſite, are neceſſary to the well-being of an Orchard ſimply; but the form is ſo far neceſſary, as the owner ſhall think meet. For that kind of form wherewith every particular man is delighted, we leave it to himſelf, *Suum cuique pulchrum.* The form that men like in general, is a ſquare: for although roundneſs be *forma perfectiſſima*, yet that principle is good, where neceſſity by art doth not force ſome other form. If within one large ſquare, the Gardiner ſhall make one round Labyrinth or Maze, with ſome kind of Berries, it will grace your form, ſo there be ſufficient room left for walks, ſo will four or more round knots do, for it is to be noted, that the eye muſt be pleaſed with the form. I have ſeen ſquares riſing by degrees, with ſtairs from your houſe-ward, according to this form which I have, *Craſſa quod aiunt Minerva*, with an unſteady hand, rough hewen: for in forming Country gardens, the better ſort may uſe better forms, and more coſtly work. What is needfull more to be ſaid, I refer all that (concerning the form) to the Chapter 17. of the Ornaments of an Orchard.

The uſual form is a ſquare.

CHAP. VI.
Of fences.

ALL your labour paſt and to come about an Orchard is loſt, unleſs you fence well: It ſhall grieve you much to ſee your young ſets rubd looſe at the Roots, the bark pild, the boughs and twigs cropt, your fruit ſtoln, your Trees broken, and your many years labours and hopes deſtroyed, for want of fences. A chief care muſt be had in this point: you muſt therefore plant in ſuch a ſoyl, where you may Provide a convenient, ſtrong, and ſeemly fence. For you can poſſeſs no goods, that have ſo many enemies as an Orchard, look Chapter 13. Fruits are ſo delightſome, and deſired of ſo many, (nay, in a manner of all) and yet few will be at coſt, and take pains to provide them. Fence well therefore, let your plot be wholly in your own power, that you

Effects of evil fencing.

Let the fence be your own.

make all your fence your self: for neighbours fence is none at all, or very careleſs. Take heed of a door or window, (yea of a wall) of any other mans into your Orchard, yea, though it be nailed up, or the wall be high, for perhaps they will prove theeves.

Kinds of Fences, earthen walls.

All fences commonly are made of Earth, Stone, Brick, Wood, or both earth and wood: Dry wall of earth, and dry ditches are the worſt fences ſave pales or railes, and do waſte the ſooneſt, unleſs they be well copt with Glooe and morter, whereon at Michael tide it will be good to ſow Wall-flowers, commonly called Bee-flowers, or winter Gilly-flowers, becauſe they will grow (though among ſtones) and abide the ſtrongeſt froſt and drought, continually green and flowring even in winter, and have a pleaſant ſmell, and are timely, (that is, they will flower the firſt and the laſt of flowers) and are good for Bees. And your earthen wall is good for bees, dry and warm, but theſe fences are both unſeemly, evil to repair, and onely for need, where ſtone or wood cannot be had. Whoſoever makes ſuch walls, muſt not pill the ground in the Orchard, for getting earth, nor make any pits or hollowes, which are both unſeemly and unprofitable: Old dry earth mixt with ſand is beſt for theſe. This kind of wall will ſoon decay by reaſon of the Trees which grow neer it, for the roots and boals of great Trees, will increaſe, undermine, and over-turn ſuch walls, though they were of ſtone, as is apparent by Aſhes, Round-trees, Burt-trees, and ſuch like, carried in the chat, or berry, by birds into ſtone walls.

Pale and Rail.

Fences of dead wood, as pales, will not laſt, neither will railes either laſt or make good fence.

Stone walls.

Stone walls, (where ſtone may be had) are the beſt of this ſort, both for fencing, laſting, and ſhrouding of your young trees, but about this you muſt beſtow much Pains and more coſt, to have them handſome, high and durable.

Quick wood and Moats.

But of all other (in mine opinion) Quick wood and moats, or ditches of water, where the ground is Level, is the beſt fence: In unequal grounds, which will not keep water, there a double ditch may be caſt, made ſtreight and Level on the top two yards broad for a fair walk, five or ſix foot higher than the ſoyl, with a gutter on either ſide, two yards wide, and four foot deep, ſet without with three or four cheſs of thorns, and within with Cherries, Plums,

Plums, Damſons, Bullis, Filbirds, (for I love thoſe trees better for their fruit, and as well for their form, as Privit,) for you may make them take any form. And in every corner, (and middle if you will) a mount would be Raiſed, whereabout the wood may claſpe, poudered with wood-bind, which will make with dreſſing a fair, pleaſant, profitable, and ſure fence. But you muſt be ſure that your quick thorns either grow wholly, or that there be a ſupply betimes, either planting new, or plaſhing the old where need is. And aſſure your ſelf, that neither wood, ſtone, earth, nor water, can make ſo ſtrong a fence as this at ſeven years growth.

Moats, Fiſh-ponds, and (eſpecially at one ſide a River) within and without your fence, will afford you fiſh, fence, and moiſture to your Trees; and pleaſure alſo, if they be ſo great and deep that you may have Swans, and other water Birds, good for devouring of vermine, and boat for many good uſes. Moats.

It ſhall hardly avail you to make any fence for your Orchard, if you be a niggard of your fruit. For as Liberality will ſave it beſt from noiſome neighbours, (Liberality I ſay is the beſt fence) ſo juſtice muſt reſtrain Rioters. Thus when your ground is tempered, ſquared and fenced, it is time to provide for planting.

CHAP. VII.
Of Sets.

THere is not one point (in my Opinion) about an Orchard more to be regarded, than the choice getting and ſetting of good plants, either for readineſs of having good fruit, or for continual laſting, for whoſoever ſhall fail in the choice of good ſets, or in getting, or gathering, or ſetting his plants, ſhall never have a good or laſting Orchard. And I take want of skill in this faculty, to be a chief hinderance to the moſt Orchards, and to many for having Orchards at all.

Some for Readineſs uſe ſlips, which ſeldome take Root, and if they do take, they cannot laſt, both becauſe their Root having a main wound will in ſhort time decay the body of the Tree: and beſides, that Roots being ſo weakly put, are ſoon nipt with drought or froſt, I could never ſee (lightly) any ſlip, but of apples onely, ſet for Trees. Slips.

Bur-knot.

A Bur-knot kindly taken from an Apple-tree, is much better and ſurer. You muſt cut him cloſe at the Root end, an handful under the knot, (ſome uſe in Summer about Lammas, to circumciſe him, and put earth to the knots with hay-Ropes, and in winter cut him off and ſet him; but this is curioſity needleſs, and danger with removing and drought) and cut away all his twigs ſave one, the moſt principal, which in ſetting you muſt leave above the earth, burying his trunck in the cruſt of the earth for his Root. It matters not much what part of the bough the twigs grow out of. If it grow out of, or neer the Root end, ſome ſay ſuch an apple will have no core nor kernel. Or if it pleaſe the planter he may let his bough be crooked, and leave out his top end one foot, or ſomewhat more, wherein will be good grafting; if either you like not, or doubt the fruit of the bough, (for commonly your bur-knots are Summer fruit) or if you think he will not Recover his wound ſafely.

Uſual ſets.

The moſt uſual kind of Sets, are plants with Roots growing, of kernels of Apples, Pears, and Crabbs, or ſtones of Cherries, Plums, &c. removed out of a nurſery, wood, or other Orchard, into, and ſet, in your Orchard in due places; I grant this kind to be better than either of the other by much, as more ſure and more durable. Herein you muſt note, that in Sets ſo removed, you get all the Roots you can, and without bruiſing of any, I utterly diſlike the opinion of thoſe great Gardeners, that following their books, would have the main Roots cut away: for tops cannot grow without Roots. And becauſe none can get all the Roots, and removal is an hinderance, you may not leave on all tops, when you ſet them: For there is a proportion betwixt the Top and Root of a Tree, even in the number, (at leaſt in the growth) If the Roots be many, they will bring you many Tops, if they be not hindered. And if you uſe to ſtow or top your tree too much, or too low, and leave no iſſue, or little for ſap, (as is to be ſeen in your hedges) it will hinder the growth of Roots and boal, becauſe ſuch a kind of ſtowing is a kind of ſmothering or choaking the ſap. Great Wood, as Oak, Elm, Aſh, &c. being continually kept down with ſheer knife, ax, &c. neither boal nor Root will thrive, but as an hedge or buſh. If you intend to graft in your ſets, you may cut him cloſer with a greater wound, and neerer the earth with-

Main Roots cut.

Stow ſets removed.

within a foot or two, because the graft or grafts will cover his wound. If you like his fruit, and would have him to be a Tree of himself, be not so bold. This I can tell you, that though you do cut his top close, and leave nothing but his bulk, because his roots are few, if he be (but little) bigger than your thumb, (as I wish all plants removed to be) he will safely recover his wound within seven years, by good guidance, that is, if the next time of dressing, immediately above his uppermost sprig, you cut him off aslope cleanly, so that the sprig stand on the back-side, (and if you can Northward, that the wound may have the benefit of the Sun) at the upper end of the wound, and let that sprig onely be the boal. And take this for a general rule; Every young plant, if he thrive, will recover any wound above the earth, by good dressing, although it be to the one half, and to his very heart. This short cutting at the remove, saves your plants from wind, and needs the less or no staking: I commend not lying or leaning of Trees against holds or stays, for it breeds obstruction of sap, and wounds incurable. All removing of Trees as great as your arm, or above, is dangerous; though some time such will grow, but not continue long, because they be tainted with deadly wounds, either in the root or top, (and a Tree once thorowly tainted, is never good.) And though they get some hold in the earth with some lesser taw or taws, which give some nourishment to the body of the Tree, yet the heart being tainted, he will hardly ever thrive; which you may easily discern by the blackness of the boughs at the heart, when you dress you trees. Also, when he is set with more tops than the Roots can nourish; the tops decaying, blacken the boughs, and the boughs the arms, and so they boyl at the very heart. Or this taint in the removal, if it kill not presently, but after some short time, it may be discerned, black, or yellowness in the bark, and a small hungred leaf. Or if your removed plant put forth leaves the next and second Summer, and little or few sprases, is a great sign of a taint, and next years death. I have known a Tree tainted in setting, yet grow, and bear blossoms for divers years; and yet for want of strength could never shape his fruit.

General rule.

Tying of trees.

General rule.

Signs of diseases, chap. 13.

Next unto this, or rather equal with these plants, are suckers growing out of the Roots of great Trees; which Cherries and

Suckers good sets.

Plums

Plums do seldome or never want, and being taken kindly with their Roots, will make very good sets. And you may help them much by enlarging their Roots with the taws of the tree, whence you take them. They are of two sorts; either growing from the very Root of the Tree: and here you must be carefull, not to hurt your Tree when you gather them, by Ripping amongst the Roots, and that you take them clean away; for these are a great and continual annoyance to the growth of your Tree, and they will hardly be cleansed. Secondly, or they do arise from some taw: and these may be taken without danger, with long and good Roots, and will soon become Trees of strength.

A Running plant.

There is another way, which I have not thorowly proved, to get not onely plants for graffing, but Sets to remain for Trees, which I call a *Running plant*, the manner of it is this: Take a Root or kirnel, and put into the middle of your plot; and the second year in the spring, geld his top, if he have one principal, (as commonly by nature they have) and let him put forth only four Syons toward the four corners of the Orchard, as near the earth as you can. If he put not four (which is rare) stay his top till he have put so many. When you have four such, cut the stock aslope, as is aforesaid in this Chapter, hard above the uppermost sprig, and keep those four without Syons clean and streight till you have them a yard and a half, at least, or two yards long. Then the next spring, in graffing time, lay down those four sprays, towards the four corners of your Orchard, with their tops in a heap of pure and good earth, and raised as high as the Root of your Syon, (for sap will not descend) and a sod to keep them down, leaving nine or twelve inches of the top to look upward. In that hill he will put Roots, and his top new Syons, which you must spread as before, and so from hill to hill, till he spread the compass of your ground, or as far as you List. If in bending the Syons crack, the matter is small; cleanse the ground, and he will recover. Every bended bough will put forth branches, and become Trees. If this plant be of a bur knot, there is no doubt: I have proved it in one branch my self, and I know at *Wilton* in *Cleveland*, a Pear-Tree of a great bulk and age, blown close to the earth, hath put at every knot Roots into the earth, and from Root to top, a great number of mighty arms or Trees, filling a great Room, like many Trees, or

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a little Orchard; much better may it be done by Art, in a less Tree. And I could not mislike this kind, save that time will be long before it come to perfection.

Many use to buy sets already grafted, which is not the best way: for first, all removes are dangerous: Again, there is danger in the carriage: Thirdly, it is a costly course of planting: Fourthly, every Gardner is not trusty to sell you good fruit: Fifthly, you know not which is best, which is worst, and so may take most care about your worst Trees. Lastly, this way keeps you from practise, and so from experinece, in so Good, Gentlemanly, Scholar-like, and profitable a faculty. Sets bought.

The onely best way (in my opinion) to have sure and lasting sets, is never to remove: for every remove is a hinderance, if not a dangerous hurt, or deadly taint. This is the way: The platform being laid, and the plot appointed where you will plant every Set in your Orchard, dig the room where your Set shall stand, a yard compass, and make the earth mellow and clean, and mingle it with a few cole-ashes, to avoid worms, and immediatly after the first change of the Moon, in the latter end of *February*, the earth being afresh turned over, put in every such room three or four kirnels of Apples or Pears of the best; every kirnel in an hole made with your finger, finger-deep, a foot distant one from another, and that day month following, as many more, (least some of the former miss) in the same compass, but not in the same holes. Hence (God willing) shall you have roots enough: If they all, or divers of them come up, you may draw, (but not dig) up (nor put down) at your pleasure, the next *November*. How many soever you take away, to give or bestow elsewhere, be sure to leave two of the proudest. And when in your second or third year you graff, if you graff then at all, leave the one of those two ungraffed, lest in graffing the other, you fail. For I find by tryal, that after the first or second graffing in the same stock, being mist (for who hits all) the third mess puts your stock in deadly danger, for want of issue of sap. Yea, though you hit in graffing, yet may your graffs with wind or otherwise be broken down. If your graffs or graff prosper, you have your desire, in a plant unremoved, without taint, and the fruit at your own choice: and so you may, (some little earth being removed) pull but not dig up The best Sets. Unremoved how.

up the other plant or plants in that room. If your graff or ſtock, or both periſh, you have another in the ſame place, of better ſtrength to work upon, for thriving without ſnub, he will overlay your grafted ſtock much. And it is hardly poſſible to miſs in grafting ſo often, if your Gardiner be worth his name.

Sets ungrafted beſt of all.

It ſhall not be amiſs, (as I judge it) if your kernels be of choice fruit, and that you ſee them come forward proudly in their body, and bear a fair and broad leaf in colour, tending to a greeniſh yellow, (which argues pleaſant and great fruit) to try ſome of them ungrafted: for although it be a long time ere this come to bear fruit, ten or twelve years, or more; and at their firſt bearing, the fruit will not ſeem to be like his own kind, yet am I aſſured, upon Tryal, before twenty years growth, ſuch Trees will increaſe the bigneſs and goodneſs of their fruit, and come perfectly to their own kind. Trees (like other breeding creatures) as they grow in years, bigneſs, and ſtrength, ſo they mend their fruit. Husbands and Houſewives find this true by experience, in the Rearing of their young ſtore. More than this, there is no Tree like this for ſoundneſs, and durable laſt, if his keeping and dreſſing be anſwerable. I grant, the readieſt way to come ſoon to fruit, is graffing; becauſe, in a manner, all your graffs are taken off fruit-bearing Trees.

Time of removing.

Now when you have made choice of your ſets to remove, the ground being ready, the beſt time is, immediately after the fall of the Leaf, in or about the change of the Moon, when the ſap is moſt quiet, for then the ſap is turning; for it makes no ſtay, but in the extremity of drought or cold: At any time in winter, may

General rule.

you tranſplant Trees, ſo you put no ice nor ſnow to the Root of your plant in the ſetting: and therefore open, calm, and moiſt weather is beſt. To remove, the Leaf being ready to fall, and not fallen, or buds apparently put forth in a moiſt warm ſeaſon, for need, ſometime may do well; but the ſafeſt is to walk in the plain trodden path.

Some hold Opinion, that it is beſt removing before the fall of the Leaf, and I hear it is commonly practiſed in the South by our beſt Arboriſts, the leaf not fallen, & they give the reaſon to be, that the deſcending of the ſap will make ſpeedy Roots. But mark the Reaſons following, and I think you ſhall find no ſoundneſs either

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in that position or practice, at least in the reason.

1. I say it is dangerous to remove when the sap is not quiet; for every remove gives a main check to the stirring sap, by staying the course thereof in the body of your plant, as may appear by trees removed any time in Summer, they commonly dye, nay, hardly shall you save the life of the most young and tender plant of any kind of wood (scarcely hearbs) if you remove them in the pride of sap; for proud sap universally stayed by removal, ever hinders, often taints, and so presently, or in very short time, kills. Sap is like blood in mans body, in which is the life, Chap. 3. page 9. If the blood universally be cold, life is excluded: so is sap tainted by untimely removal. A stay by drought, or cold, is not so dangerous, (though dangerous, if it be extream) because more natural.

2. The sap never descends, as men suppose; but is consolidated and transubstantiated into the substance of the tree, and passeth (alwaies above the earth) upward, not only betwixt the bark and the wood, but also into and in both body and bark, though not so plentifully, as may appear by a tree budding, nay, fructifying two or three years, after he be circumcised, at the very root, like a River that enlargeth his channel by a continual descent.

3. I cannot perceive what time they would have the sap to descend. At *Midsummer* in a biting drought it stays, but descends not; for immediately upon moisture it makes second shoots, at (or before rather) *Michaeltide*, when it shapens his buds for next years fruit. If at the fall of the leaf, I grant, about that time is the greatest stand, but no descent of sap, which begins somewhat before the leaf fall, but not long; therefore at that time must be the best removing, not by reason of descent, but stay of sap.

4. The sap in this course hath its profitable and apparent effects; as the growth of the tree, covering of wounds, putting of buds, &c. Whereupon it follows, if the sap descend, it must needs have some effect to shew it.

5. Lastly, boughs plasht and laid lower than the root, dye for want of sap descending, except where it is forced by the main stream of the sap, as in top boughs hanging like water in pipes, or except the plasht boughs lying on the ground put roots of his own; yea, under boughs, which we commonly call water-boughs,

can scarcely get sap to live, yea, in time dye, because the sap doth press so violently upward, and therefore the faireſt shoots and fruits are alwaies in the top.

Remove soon. *Object.* If you say that many so removed thrive; I say, that somewhat before the fall of the leaf (but not much) is the stand; for the fall and the stand are not at one instant; before the stand, is dangerous. But to return.

The sooner in Winter you remove your sets, the better; the latter, the worse; for it is very perillous if a strong draught take your sets before they have made good their Rooting. A plant set at the fall, shall gain (in a manner) a whole years growth of that which is set in the spring after.

The manner of setting. I use in the setting to be sure that the earth be mouldy, (and somewhat moist) that it may run among the small tangles without straining or bruising; and as I fill in earth to his Roots, I shake the Set easily too and fro, to make the earth settle the better to his Roots; and withall easily with my foot I put in the earth close; for Air is noysome, and concavities will follow. Some prescribe Oats to be put in with the earth: I could like it, if I could know any Reason thereof. And they use to set their plants with the same side towards the Sun; but this conceit is like the other. For first, I would have every tree to stand so free from shade, that not onely the Root (which therefore you must keep bare from grass) but body, boughs, and branches, and every spray, may have the benefit of the Sun. And what hurt, if that part of the tree which before was shadowed, be now made partakers of the heat of the Sun? In turning of Bees, I know it is hurtfull, because it changeth their entrance, passage, and whole work, but not so in trees.

Set in the crust. Set as deep as you can, so that in any wise you go not beneath the crust. Look Chap. 2.

Moisture good. We spake in the second Chapter of moisture in general; but now especially having put your removed plant into the earth; powr on water (of a puddle were good) by distilling presently, and so every week twice, in strong drought, so long as the earth will drink, and refuse by over-flowing. For moisture mollifies, and both gives leave to the Root to spread, and makes the earth yield sap and nourishment with plenty and facility. Nurses, they

(they say) give best and most milk after warm drinks.

If your ground be such, that it will keep no moisture at the Root of your plant, such plants shall never like, or but for a time. There is nothing more hurtfull for young trees, then piercing drought. I have known trees of good stature, after they have been of divers years growth, and thrive well for a good time, perish for want of water, and very many by reason of taints in setting.

It is meet your sets and grafts be fenced, till they be as big as your arm, for fear of annoyances. Many wayes may Sets receive damages, after they be set, whether grafted or ungrafted. For although we suppose, that no noysome beast or other thing must have access among your trees; yet by casualty, a Dog, Cat, or such like, or your self, or negligent friend bearing you Company, or a shrewd boy, may tread or fall upon a young and tender plant or graft. To avoid these and many such chances, you must stake them round a pretty distance from the Set, neither so neer nor so thick, but that it may have the benefit of the Sun, Rain, and Air. Your stakes (small or great) would be so surely put, or driven into the earth, that they break not, if any thing happen to lean upon them, else may the fall be more hurtfull then the want of the fence. Let not your stakes shelter any weeds about your Sets; for want of Sun is a great hinderance. Let them stand so far off, that your grafts spreading receive no hurt, either by rubbing on them, or of any other thing passing by. If your stock be long, and high grafted, (which I must discommend, (except in need) becaufe there the sap is weak, and they are subject to strong winds, and the lightings of birds,) tie easily with a soft list three or four pricks, under the clay, and let their tops stand above the grafts to avoid the lighting of Crows, Pies, &c. upon your grafts. If you stick some sharp thorns at the Root of your stalks, they will make hurtfull things keep off the better. Other better fences for your grafts I know none. And thus much for sets and setting.

Grafts must be fenced.

CHAP. VIII.

Of the distance of Trees.

I Know not to what end you should provide good ground, well fenced, and plant good sets, and when your trees should come

to profit, have all your labours loſt, for want of due regard to the diſtance of placing your trees. I have ſeen many trees ſtand ſo thick, that one could not thrive for the throng of his neighbours. If you do mark it, you ſhall ſee the tops of trees rubbed off, their ſide galled like a gall'd horſe back; and many trees have more ſtumps than boughs, and moſt trees not well thriving, but ſhort, ſtumpiſh, and evil thriving boughs; like a Corn-field over-ſeeded, or a Town over-peopled, or a paſture over-laid; which the Gardner muſt either let grow, or leave the tree very few boughs to bear fruit. Hence ſmall thrift, galls, wounds, diſeaſes, and ſhort life to the trees; and, while they live, green, little, hard, worm-eaten, and evil thriving fruit ariſe, to the diſcomfort of the owners.

Hurts of too neer planting.

To prevent which diſcommodity, one of the beſt remedies is, the ſufficient and fit diſtance of trees. Therefore at the ſetting of your plants, you muſt have ſuch reſpect, that the diſtance of them be ſuch, that every tree be not annoyance, but an help to his fellows; for trees (as all other things of the ſame kind) ſhould ſhroud, and not hurt one another. And aſſure your ſelf, that every touch of trees (as well under as above) is hurtfull: Therefore this muſt be a general rule in this Art, that no tree in an Orchard well ordered, or no bough, nor cyon, drop upon or touch his fellows. Let no man think this impoſſible, but look in the eleventh Chapter of dreſſing of trees. If they touch, the wind will cauſe a forcible rub. Young twigs are tender, if boughs or arms touch or rub, if they are ſtrong, they make great galls. No kind of touch therefore in trees can be good.

General rule. All touches hurtful.

Now it is to be conſidered what diſtance among Sets is requiſite, and that muſt be gathered from the compaſs and room that each tree by probability will take and fill. And herein I am of a contrary opinion to all them which practice or teach the planting of trees, that ever yet I knew, read, or heard of: for the common ſpace between tree and tree, is ten foot; if twenty foot, it is thought very much. But I ſuppoſe twenty yards diſtance is ſmall enough betwixt tree and tree, or rather too too little. For the diſtance muſt needs be as far as two trees are well able to overſpread and fill; ſo they touch not by one yard at the leaſt. Now I am aſſured, and I know one Apple-tree, ſet of a ſlip *finger great*, in

The beſt diſtance of trees.

in the ſpace of twenty years (which I account a very ſmall part of a trees age, as is ſhewed Chapter 14.) hath ſpread his boughs eleven or twelve yards compaſs; that is, five or ſix yards on every ſide. Hence I gather, that in forty or fifty years, (which yet is but a ſmall time of his age) a tree in good ſoyl, well liking, by good dreſſing (for that is much available to this purpoſe) will ſpread double at the leaſt, viz. twelve yards on a ſide; which being added to twelve allotted to his fellow make twenty and four yards, and ſo far diſtant muſt every tree ſtand from another. And look how far a tree ſpreads his boughs above, ſo far doth he put his roots under the earth, or rather further, if there be no ſtop nor let by walls, trees, rocks, barren earth, and ſuch like: for an huge bulk, and ſtrong armes, maſſie boughs, many branches, and infinite twigs, require wide ſpreading Roots. The top hath the vaſt air to ſpread his boughs in, high and low, this way and that way; but the Roots are kept in the cruſt of the earth, they may not go downward, nor upward out of the earth, which is their Element, no more than the Fiſh out of the water, Camelion out of the air, nor Salamander out of the fire. Therefore they muſt needs ſpread far under the earth. And I dare well ſay, If nature would give leave to man, by Art to dreſs the Roots of Trees, to take away the taws, and tangles that lap and fret, and grow ſuperfluouſly and diſorderly, (for every thing *ſublunary* is curſed for man's ſake) the tops above being anſwerably dreſſed, we ſhould have trees of wonderfull greatneſs, and infinite durance. And I perſwade my ſelf that this might be done ſometimes in Winter, to trees ſtanding in fair plains and kindly earth, with ſmall or no danger at all. So that I conclude, that twenty four yards is the leaſt ſpace that Art can allow for trees to ſtand diſtant one from another.

The parts of a Tree.

If you ask me what uſe ſhall be made of that waſte ground betwixt tree and tree: I anſwer, if you pleaſe to plant ſome tree or trees in that middle ſpace, you may; and as your trees grow contiguous, great and thick, you may at your pleaſure take up thoſe laſt trees. And this I take to be the chief cauſe why the moſt trees ſtand ſo thick; for men not knowing (or not regarding) this ſecret of needfull diſtance, and loving fruit

Waſt grounds in an Orchard.

fruit of trees planted to their hands, think much to pull up any, though they pine one another. If you or your heirs or succeſſors would take up ſome great trees (paſt ſetting) where they ſtand too thick, be ſure to do it about *Midſomer*, and leave no main Roots. I deſtinate the ſpace of four and twenty yards, for trees of age and ſtature. More then this, you have borders to be made for walks, with Roſes, Berries, &c.

And chiefly conſider, that your Orchard, for the firſt twenty or thirty years, will ſerve you for many Gardens; for Saffron, Licoras, Roots, and other herbs for profit, and flowers for pleaſure: ſo that no ground need be waſted if the Gardiner be skilfull and diligent. But be ſure you come not neer with ſuch deep delving the Roots of your Trees, whoſe compaſs you may partly diſcern, by the compaſs of the tops, if your top be well ſpread. And under the droppings and ſhadow of your Trees, be ſure no herbs will like. Let this be ſaid for the diſtance of Trees.

CHAP. IX.

Of the placing of Trees.

THe placing of Trees in an Orchards is well worth the regard: For although it muſt be granted, that any of our foreſaid Trees (Chap. 2.) will like well in any part of your Orchard, being good and well dreſt earth; yet are not all Trees alike worthy of a good place. And therefore I wiſh that your Fibert, Plums, Damſons, Bulleſs, and ſuch like, be utterly removed from the plain ſoyl of your Orchard into your fence: for there is not ſuch fertility and eaſefull growth, as within: and there alſo they are more ſubject to, & can abide the blaſts of *Æolus*. The Cherries and Plums being ripe in the hot time of Summer, and the reſt ſtanding longer, are not ſo ſoon ſhaken as your better fruit, neither, if they ſuffer loſs, is your loſs ſo great. Beſides that, your fences and ditches will devour ſome of your fruit growing in, or neer your hedges. And ſeeing the continuance of all theſe (except Nuts) is ſmall, the care of them ought to be the leſs. And make no doubt, but the fences of a large Orchard will contain a ſufficient number of ſuch kind of Fruit-Trees in the whole compaſs. It is not material, but at your pleaſure, in the ſaid fences, you may either intermingle your

your ſeveral kinds of fruit trees, or ſet every kind by it ſelf, order doth very well become your better and greater fruit. Let therfore your Apples, Pears, and Quinces, poſſeſs the ſoyl of your Orchard, unleſs you be eſpecially affected to ſome of your other kinds; and of them, let your greateſt trees of growth ſtand further from Sun, and your Quinces at the South ſide or end, and your Apples in the middle: ſo ſhall none be any hindrance to his fellows. The warden-tree, and Winter-pear, will challenge the preeminence for ſtature. Of your Apple-trees, you ſhall find a difference in growth. A good Pippin will grow large, and a Coſtard tree: ſtead them on the North ſide of your other Apples; thus being placed, the leaſt will give Sun to the reſt, and the greateſt will ſhroud their fellows. The Fences and out-trees will guard all.

CHAP. X.

Of Graffing.

NOw are we come to the moſt curious point of our faculty, curious in conceit, but indeed as plain and eaſie as the reſt, when it is plainly ſhewn, which we commonly call Graf- Of Graving or Carving.

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Grafting what. fing or (after ſome) Grafting, I cannot Etymologize or ſhew the original of the Word, except it come of Graving or Carving.

But the thing or matter is: The reforming of the fruit of one tree with the fruit of another, by an artificial tranſplacing or tranſpoſing of a twigg, bud, or leaf, (commonly called a A Graff. Graft) taken from one tree of the ſame, or ſome other kind, and placed or put to, or into another tree in one time and manner.

Kinds of grafting. Of this there be divers kinds, but three or four now eſpecially in uſe: to wit, Grafting, inciſing, packing on, grafting in the ſcutchion, or inoculating; whereof the chief and moſt uſual is called Grafting, by the general name, *Catexochen*:) for it is the moſt known, ſureſt, readieſt, and plaineſt way to have ſtore of good fruit.

Graft how. It is thus wrought; You muſt with a fine, thin, ſtrong, and ſharp Saw, made and armed for that purpoſe, cut off a foot above the ground, or thereabouts, in a plain without a knot, or as near as you can without a knot (for ſome ſtocks will be knotty) your Stock, ſet, or plant being ſurely ſtayed with your foot and legg; or otherwiſe ſtraight overthwart (for the Stock may be crooked) and then plain his wound ſmoothly with a ſharp knife: that done, cleave him gently in the middle with a cleaver, and a knock or mall, and with a wedge of Wood, Iron, or Bone, two handfull long at leaſt, put in the middle of that clift, with the ſame knock, make the wound gape a ſtraw-breadth wide into which you muſt put your Graffs.

A graft what. The graft is a top twig taken from ſome other tree (for it is a folly to put a graff into his own ſtock) beneath the uppermoſt (and ſometimes in need, the ſecond) knot, and with a ſharp knife fitted in the knot (and ſometimes out of the knot when need is) with ſhoulders an inch downward, and ſo put into the ſtock with ſome thruſting (but not ſtraining) bark to bark inward.

Eyes. Let your graff have three or four eyes for readineſs to put forth, and give iſſue to the ſap. It is not amiſs to cut off the top of your graff, and leave it but five or ſix inches long, becauſe commonly you ſhall ſee the tops of long graffs dye. The reaſon is this, the ſap in graffing receives a rebuke, and cannot work ſo ſtrongly preſently,

ſently, and your graffs receive not ſap ſo readily, as the natural branches. When your graffs are cleanly and cloſely put in, & your wedge pull'd out nimbly, for fear of putting your graffs out of frame, take well tempered morter, ſoundly wroughtwith chaff, or horſe-dung, (for the dung of Cattel will grow hard, and ſtrain your graffs) the quantity of a Gooſe egge, and divide it Juſt, and therewithall cover your ſtock, laying the one half on the one ſide, and the other half on the other ſide of your graffs, (leſt thruſting again your graffs you move them) and let both your hands thruſt at once, and alike, and let your clay be tender, to yield eaſily; and all, leſt you move your graffs. Some uſe to cover the cleft of the ſtock, under the clay, with a Piece of bark or leaf, ſome with a ſear-cloath of wax and butter, which as they be not much needfull, ſo they hurt not, unleſs that by being buſie about them, you move your graffs from their places. They uſe alſo moſs, tyed on above the clay with ſome bryar, wicker, or other bands: Theſe profit nothing. They all put the graffs in danger, with pulling and thruſting: for I hold this general Rule in graffing, and planting; if your ſtock and graffs take, and thrive, (for ſome will take and not thrive, being tainted by ſome means in the planting, or graffing) they will (without doubt) recover their wounds ſafely and ſhortly. General rule.

The beſt time of graffing, from the time of removing your ſtock, is the next Spring, for that ſaves a ſecond wound, and a ſecond repulſe of ſap, if your ſtock be of ſufficient bigneſs to take a graff from as big as your thumb, to as big as an arm of a man. You may graff leſs, (which I like) and bigger, which I like not ſo well. The beſt time of the year is in the laſt part of *February*, or *March*, or beginning of *April*, when the Sun with his heat begins to make the ſap ſtir more Rankly about the change of the Moon, before you ſee any great apparency of leaf or flowers, but onely knots and buds, and before they be proud, though it be ſooner: Cherries, Pears, Apricocks, Quinces, and Plums, would be gathered and grafted ſooner. Time of graffing.

The graffs may be gathered ſooner in *February*, or any time within a month or two before you graff, or upon the ſame day (which I commend) if you get them any time before: for I Gathering of graffs.

have known graffs gathered in *December*, and do well, take heed of drought; I have my ſelf taken a burk, not of a Tree, and the ſame day when he was laid in the earth about mid *February*, gathered grafts and put in him, and one of thoſe graffs bore the third year after, and the fourth plentifully; Graffs of old Trees would be gathered ſooner then of young Trees, for they ſooner break and bud. If you keep graffs in the earth, moiſture with the heat of the Sun will make them ſprout as faſt, as if they were growing on the Tree. And therefore, ſeeing keeping is dangerous, the ſureſt way (as I judge) is, to take them within a week of the time of your grafting.

Graffs of old trees.

The grafts would be taken not of the proudeſt twigs, for it may be your ſtock is not anſwerable in ſtrength. And therefore (ſay I) the grafts brought from South to us in the North, although they take and thrive, (which is ſomewhat doutfull, by reaſon of the difference of the clime and carriage) yet ſhall they in time faſhion themſelves to our cold Northern ſoil, in growth, taſte, &c.

Where taken.

Nor of the pooreſt; for want of ſtrength may make them unready to receive ſap, (and who can tell but a poor graft is tainted) nor on the outſide of your Tree, for where ſhould your Tree ſpread, but in the middeſt: for there you may be ſure your Tree is no whit hindered in his growth or form. He will ſtill recover inward, more than you would wiſh. If your clay clift in Summer with drought, look well in the Chinkes for Emmets, and Earwigs, for they are cunning and cloſe theeves, about grafts; you ſhall find them ſtirring in the morning and evening, and the rather in the moiſt weather: I have had many young buds of Graffs, even in the flouriſhing, eaten with Ants. Let this ſuffice for graffing, which is in the faculty counted the chief ſecret, and becauſe it is moſt uſuall, it is beſt known.

Emmets.

Graffs are not to be diſliked for growth, till they wither, pine, and die. Uſually before *Midſummer* they break, if they live. Some (but few) keeping proud and green, will not put till the ſecond year, ſo is it to be thought of Sets.

The firſt ſhew of putting is no ſure ſign of growth, it is but the ſap the graff brought with him from his Tree.

So ſoon as you ſee the graft put forth growth, take away the clay, for then doth neither the ſtock nor the graft need it, (put a little

little fresh well tempered clay in the hole of the stock) for the clay is now tender, and rather keeps moisture then drought.

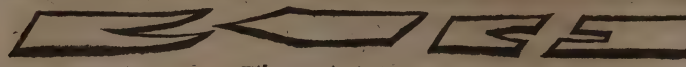
The other wayes of changing the natural fruit of Trees, are more curious then profitable, and therefore I mind not to bestow much labour or time about them, only I shall make known what I have proved, and what I do think.

And first, of Incising, which is the cutting of the back of the boal, a Rine or branch of a Tree at some bending, or knee shoulderwise with two gashes, onely with a sharp knife to the wood; then take a wedge, the bigness of your graff, sharp ended, flat on the one side, agreeing with the Tree, and round on the other side, and with that being thrust in, raise your bark, then put in your graff, fashioned like your wedge just: and lastly, cover your wound, and fast it up, and take heed of straining. This will grow but to small purpose, for it is weak hold, and lightly it will be under growth. Thus may you graft betwixt the bark and the Tree of a great stock, that will not easily be clifted. But I have tryed a better way for great trees, *viz.* First, cut him off straight, and cleanse him with your knife; then cleave him into four quarters equally with a strong cleaver: then take for every clift, two or three small (but hard) wedges, just of the bigness of your grafts, and with those wedges driven in with a hammer, open the four clifts so wide, (but no wider) that they may take your four graffs with thrusting, not with straining: And lastly, cover and clay it closely, and this is a sure and good way of grafting: or thus, clift your stock by his edges twice or thrice with your cleaver, and open him with your wedge in every clift one by one, and put in your graffs, and then cover them: This may do well. Incising. A great stock.

Packing on, is, when you cut aslope, a twig of the same bigness with your graft, either in or besides the knot, two inches long, and make your graft agree jump with the cyon, and gash your graft and your cyon in the middest of the wound, length-way, a straw breadth deep, and thrust the one into the other, wound to wound, sap to sap, bark to bark, then tye them close, and clay them: This may do well. The fairest graft I have in my little Orchard, which I have planted, is thus packt on, and the branch whereon I put him, is in his plentiful Root. Packing thus.

To be short in this point, cut your graft in any sort or fashion

two inches long, and joyn him cleanly, and close to any other sprig of any Tree in the latter end of the time of grafting, when sap is somewhat rife, and in all probability, they will close and thrive: thus;



The sprig. The graft. The twig. The graft.

Or any other fashion you think good.

Innoculating. Innoculating is an eye, or bud, taken bark and all from one Tree, and placed in the room of another eye or bud of another; cut both of one compass, and their bound. This must be done in Summer, when the sap is proud.

Grafting in Scutchion. Much like unto this, is, that they call grafting in the scutchion, they differ thus: That here you must take an eye with his leaf, or (in mine opinion) a bud with his leaves. (Note that an eye is for a cyon, a bud is for flowers and fruit) and place them on another Tree, in a plain, (for they so teach) the place, or bark, where you must set it, must be thus cut with a sharp knife, and the bark raised with a wedge, and then the eye or bud put in, and so bound up, I cannot deny but such may grow. And your bud if he take will flower, and bear fruit in that year; as some grafts, and sets also, being set for blooms. If these two kinds thrive, they reform but a spray, and an under growth: Thus you may place Roses, or Thorns, and Cherries on Apples, and such like. Many write much more of grafting, but to small purpose; whom we leave to themselves, and their followers, and ending this secret, we come in the next Chapter to a point of knowledge, most requisite in an Arborist, as well for all other Woods, as for an Orchard.

CHAP. II.

Of the right dressing of Trees.

Necessity of dressing trees. IF all these things aforesaid were indeed performed, as we have shewed them in words, you should have a perfect Orchard, nature and substance, begun to your hand: And yet are all these things nothing, if you want that skill to keep and dress your Trees. Such is the condition of all earthly things, whereby a man receiveth profit, or pleasure, that they degenerate presently

ly without good ordering. Man himſelf, left to himſelf, grows from his heavenly and ſpiritual generation, and becommeth beaſtly, yea, deviliſh to his own kind, unleſs he be regenerate. No marvel then, if Trees make their ſhoots, and put their ſprays diſorderly. And truly, (if I were worthy to judge) there is not a miſchief that breedeth greater and more general harm to all the Orchard, (eſpecially, if they be of any continuance) that ever I ſaw, (I will not except three) then the want of the skilful dreſſing of trees. It is a common, and unskilful opinion, and ſaying, Let all grow, and they will bear more fruit: and if thou lop away ſuperfluous boughs, they ſay, what a pitty is this? how many Apples would theſe have born? not conſidering, there may ariſe hurt to your Orchard, as well (nay, rather) by abundance, as by want of wood. Sound and thriving plants in a good ſoil will ever yield too much wood, and diſorderly, but never too little: So that a skilful and painful Arboriſt need never want matter to effect a plentiful and well dreſt Orchard; for it is an eaſie matter to take away ſuperfluous boughs, (if your Gardner have skill to know them) whereof your plants will yield abundance, and skill will leave ſufficiently well ordered. All ages, both by rule and experience, do conſent to a pruning and lopping of Trees: yet have not any that I know deſcribed unto us, (except in dark and general words) what, or which, are thoſe ſuperfluous boughes, which we muſt take away, and that is the chief and moſt needful point to be known in lopping. And we may well aſſure our ſelves, (as in all other Arts, ſo in this) there is a vantage and dexterity in skill, and an habit by practice out of experience, in the performance hereof, for the profit of mankind; yet do not I know (let me ſpeak it with the patience of our cunning Arboriſts) any thing within the compaſs of humane affairs ſo neceſſary, and ſo little regarded, not onely in Orchards, but alſo in all other Timber-trees, where, or whatſoever. General rule.

How many forreſts, and woods, wherein you ſhall have for one lively thriving Tree, four (nay, ſometimes twenty four) evil thriving, Rotten, and dying Trees, even while they live? and inſtead of trees, thouſands of buſhes and ſhrubs? What rottenneſs, what hollowneſs, what dead arms, withered tops, curtalled trunks? what loads of moſſes, drooping boughs, and dying branch- Timber-wood evil dreſt.

branches you ſhall ſee every where? And thoſe that are like in this ſort, are in a manner all unprofitable boughs, cankered arms, crooked, little and ſhort boals; what an infinite number of buſhes, ſhrubs, and skrogs of hazels, thorns, and other profitable wood, which might be brought by dreſſing to become great and goodly trees? Conſider now the cauſe: The leſſer wood hath been

Imagine the Root to be ſpread far wider.

ſpoyled with careleſs, unskilful, and untimely ſtowing, and much alſo of the great wood. The greater trees at the firſt riſing have filled, and over-laden themſelves with a number of waſtfull boughs

boughs and ſuckers, which have not only drawn the ſap from the boal, but alſo have made it knotty, and themſelves and the boal moſſie for want of dreſſing, whereas, if in the prime of growth they had been taken away cloſe, all but one top, (according to this pattern) and clean by the bulk, the ſtrength of all the ſap ſhould have gone to the bulk, and ſo he would have recovered, and covered his knots, and have put forth a fair, long, and ſtraight body, (as you ſee) for timber profitable, huge, great of bulk, and of infinite laſt. Dreſs timber trees how.

If all Timber Trees were ſuch, (will ſome ſay) how ſhould we have crooked wood for wheels, &c?

Anſw. Dreſs all you can, and there will be enough crooked for thoſe uſes.

More then this, in moſt places, they grow ſo thick, that neither themſelves, nor earth, nor any thing under or neer them can thrive, nor Sun, nor Rain, nor Air can do them, nor any thing neer or under them, any profit or comfort.

I ſee a number of Hags, where, out of one Root you ſhall ſee three or four, (nay more, ſuch is mens unskilful greedineſs, who deſiring many, have none good) pretty Oaks, or Aſhes, ſtraight and tall, becauſe the Root at the firſt ſhoot gives ſap amain: but if one onely of them might be ſuffered to grow, and that well and cleanly pruned, all to his very Top, what a Tree ſhould we have in time? And we ſee by thoſe Roots, continually and plentifully ſpringing, notwithſtanding ſo deadly wounded, what a commodity ſhould ariſe to the owner, and the Commonwealth, if wood were cheriſhed, and orderly dreſſed.

The waſte boughs cloſely and skilfully taken away, would give us ſtore of fences and fuel, and the bulk of the Tree in time would grow of huge length and bigneſs. But here (me-thinks) I hear an unskilful Arboriſt ſay, that Trees have their ſeveral forms, even by nature, the Pear, the Holly, the Aſpe, &c. grow long in bulk, with few and little arms, the Oak by nature broad, and ſuch like. All this I grant, but grant me alſo, that there is a profitable end and uſe of every Tree, from which if it decline, (though by nature) yet man by art may (nay, muſt) correct it. Now other end of Trees, I could never learn, then good Timber; fruit much and good, and pleaſure, uſes phyſical hinder nothing a good form. Profit of trees dreſſed. The end of trees.

Nei-

Trees will take any form.

Neither let any man ſo much as think, that it is unprofitable, much leſs unpoſſible, to reform any Tree of what kind ſoever: For (believe me) I have tryed it, I can bring any tree (beginning betimes) to any form. The Pear and Holly may be made to ſpread, and the Oak to cloſe.

But, why do I wander out of the compaſs of mine Orchard, into the Forreſts and Woods? Neither yet am I from my purpoſe, if boals of timber-trees ſtand in need of all the ſap, to make them great and ſtreight, (for ſtrong growth and dreſſing makes ſtrong trees) then it muſt be profitable for fruit, (a thing more immediatly ſerving a man's need) to have all the ſap his Root can yield: for as timber, ſound, great, and long, is the *good of Timber-trees*, and therefore they bear no fruit of worth: ſo fruit, good, ſound, pleaſant, great and much, is the fruit Trees end. That gardner therefore, ſhall perform his duty skilfully and faithfully, which ſhall ſo dreſs his Trees, that they may bear ſuch and ſúch ſtore of fruit, which he ſhall never do, (I dare undertake) unleſs he keep this Order in dreſſing his Trees.

The end of trees.

How to dreſs a fruit-tree.

A fruit Tree ſo ſtanding, that there need none other end of dreſſing but fruit, (not Ornaments, nor walks, nor delight to ſuch as would pleaſe their eye only, and yet the beſt form cannot but both adorn and delight) muſt be parted from within two foot or thereabouts of the earth, ſo high to give liberty to dreſs his Root, and nó higher, for drinking up the ſap that ſhould feed his fruit, for the boal will be firſt, and beſt ſerved and fed, becauſe he's next the Root, and of greateſt wax and ſubſtance, and that makes him longeſt of Life, into two, three, or four arms, as your ſtock or graffs yield twigs, and every arm into two or more branches, and every branch into his ſeveral cyons, ſtill ſpreading by equal degrees, ſo that his loweſt ſpray be hardly without the reach of a man's hands, and his higheſt be not paſt two yards higher, rarely, (eſpecially in the middeſt) that no one twig touch his fellow. Let him ſpread as far as he liſt, without his maſter-bough, or lop equally. And when any bough doth grow ſadder, and fall lower then his fellows, (as they will with weight of fruit) eaſe him the next ſpring of his ſuperfluous twigs, and he will Riſe; when any bough or ſpray ſhall amount above the reſt, either ſnub his top with a nip betwixt

twixt your finger and your thumb, or with a ſharp knife, and take him clean away, and ſo you may uſe any Cyon you would reform; and as your tree grows in ſtature, and in ſtrength, ſo let him riſe with his tops but ſlowly, and early, eſpecially in the middeſt, and equally, and in breadth alſo; and follow him upward with lopping his under-growth and water boughs, keeping the ſame diſtance of two yards, but not above three in any wiſe, betwixt the loweſt and the higheſt twigs.

Benefits of good dreſſing.

1. Thus you ſhall have well liking, clean-skind, healthfull, great, and long-laſting trees.

Remedy.

2. Thus ſhall your tree grow low, and ſafe from winds, for his top will be great, broad, and weighty.

3. Thus growing broad, ſhall your trees bear much fruit (I dare ſay) one as much as ſix of your common trees, and good without ſhadowing, dropping and fretting; for his boughs, branches, and twigs ſhall be many, and thoſe are they (not the boal) which bear fruit.

4. Thus ſhall your boal being little (not ſmall, but low) by reaſon of his ſhortneſs, take little, and yield much ſap to fruit.

5. Thus your trees by reaſon of ſtrength in time of ſetting ſhall put forth more bloſſoms and more fruit, becauſe free from taints (for ſtrength is a great help to bring forth much) and ſafely, whereas weakneſs fails in ſetting, though the ſeaſon be calm.

Some uſe to bare trees Roots in Winter, to ſtay the ſetting till hotter ſeaſons, which I diſcommend, becauſe

1. They hurt the Roots.

2. It ſtays nothing at all.

3. Though it did, being ſmall, with us in the North they have their part of our *April* and *May* Froſts.

4. Hinderance cannot profit weak trees in ſetting.

5. They waſte much labour.

6. Thus ſhall your tree be eaſie to dreſs, and without danger, either to the tree or the dreſſer.

7. Thus may you ſafely and eaſily gather your fruit without falling, bruiſing, or breaking of Cyons.

This is the beſt form of a fruit-tree, which I have here ſhad-

dowed out for the better capacity of them that are led more with the eye, then the mind, craving pardon for the deformity, becauſe I am nothing skilful either in the painting or carving.

Imagine that the paper makes but one ſide of the tree to appear, the whole round compaſs will give leave for many more arms, boughs, branches, and cyons.

The perfect form of a Fruit-tree.

If any tree cannot well be brought to this form: *Experto crede Roberto,* I can ſhew divers of them under twenty years of age.

Time beſt for Proyning.

The fitteſt time of the Moon for proyning, is, as of grafting, when the ſap is ready to ſtir (not proudly ſtirring) and ſo to cover the wound: and of the year, a month before (or at leaſt when) you graff. Dreſs Pears, Apricocks, Peaches, Cherries, and Bullis ſooner. And old trees before young plants, you may dreſs at any time bewixt Leaf and Leaf. And note, where you take any thing away, the ſap the next Summer will be putting: Be ſure therefore when he puts a bud in any place where you would not have him, rub it off with your finger.

And

And here you must remember the common homely proverb : Dressing betime.

Soon crooks the tree
That good Camrel must be.

Begin betimes with trees, and do what you list: but if you let them grow great and stubborn, you must do as the tree list. They will not bend but break, nor be wound without danger. A small branch will become a bough, and a bough an arm in bigness. Then if you cut him, his wound will fester, and hardly without good skil recover: therefore, *Obsta principiis.* Of such wounds, and lesser, or any bough cut off a handfull or more from the body, comes hollowness, and untimely death. And therefore when you cut, strike close, and clean, and upward, and leave no bunch. Faults of evil drest trees, and the remedy.

This form in some cases sometimes may be altered: If your tree, or trees, stand neer your walks, if it please your fancy more, let him not break till his boal be above your head; so may you walk under your trees at your pleasure. Or if you set your fruit trees for your shades in your Groves, then I respect not the form of the tree, but the comlines of the walk. The form altereth.

All this hitherto spoken of dressing, must be understood of young plants, to be formed: it is meet somewhat be said for the instruction of them that have old trees already formed, or rather deformed: for *Malum non vitatur nisi cognitum.* The faults therefore of a disordered tree, I find to be five. Dressing of old trees.

1. An unprofitable boal.
2. Water boughs.
3. Fretters.
4. Suckers. And,
5. One principal top.

Faults are five, and their remedies.

A long boal asketh much feeding, and the more he hath the more he desires, and gets, (as a drunken man drink, or a covetous man wealth,) and the less remains for the fruit; he puts his boughs into the air, and makes them, the fruit and it self more dangered with winds; for this I know no remedy, after that the tree is come to growth; once evil, never good. Long boal. No remedy.

Water boughs, or under growth, are such boughs as grow low under others, and are by them over-grown, over-shadowed, dropped on, and pin'd for want of plenty of sap, and by that 1. Water boughs.

means in time dye, for the ſap preſſeth upward: and it is like water in her courſe, where it findeth moſt iſſue, thither it floweth, leaving the other leſs ſluces dry, even as wealth to wealth, and much to more. Theſe ſo long as they bear, they bear leſs, worſe and fewer fruit, and wateriſh.

Remedy. The remedy is eaſie, if they be not grown greater than your arm, lop them cloſe and clean, and cover the middle of the wound; the next Summer when he is dry, with a ſalve made of tallow, tarr, and a very little pitch, good for the covering of a-

Bark pil'd, and the remedy. ny ſuch wound of a great tree: unleſs it be bark pild, and then a ſear cloth of freſh butter, honey and wax preſently (while the wound is green) applyed, is a ſoveraign remedy, in Summer eſpecially. Some bind ſuch wounds with a thumb Rope of hay, moiſt, and rub it with dung.

Fretters. Fretters are, when as by negligence of the Gardner, two or more parts of the tree, or of divers trees, as arms, boughs, branches, or twigs, grow ſo near and cloſe together, that one

Touching. of them by rubbing doth wound one another. This fault of all other ſhews the want of skill (or care at leaſt) in the arboriſt: for

Remedy. here the hurt is apparent, and the remedy eaſie, ſeen to betimes: galls are wounds incurable, but by taking away thoſe members; for let them grow, and they will be worſe and worſe, and ſo kill themſelves with civil ſtrife for Roomth, and danger: the whole tree. Avoid them betime therefore, as a Common-wealth doth boſome enemies.

Suckers. A Sucker is a long, proud, and diſorderly Cyon, growing ſtreight up (for pride of ſap makes proud, long, and ſtreight growth) out of any lower parts of the tree, receiving a great part of the ſap, and bearing no fruit, till it have tyrannized over the whole tree. Theſe are like idle and great Drones amongſt Bees: and proud and idle members in a Common-Wealth.

The Remedy of this is, as of water boughs, unleſs they be grown greater than all the reſt of the boughs; and then your Gardner (at your diſcretion) may leave him for his boal, and take away all, or the moſt of the reſt. If he be little ſlip him, and ſet him, perhaps he will take: my faireſt Apple-tree was ſuch a ſlip.

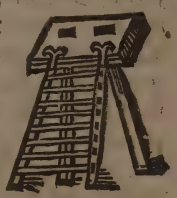
One principal top or bough, and Remedy. One or two principal top boughs are as evil in a manner as ſuckers; they riſe of the ſame cauſe, and receive the ſame Remedy:

medy: yet these are more tolerable, because these bear fruit, yea, the best; but Suckers of long time do not bear.

I know not how your tree should be faulty, if you reform all your vices timely, and orderly. As these Rules serve for dressing young trees, and sets in the first setting, so may they well serve to help old trees, though not exactly to cure them.

Instruments for dressing.

The instruments fittest for all these purposes, are most commonly, for the greatest trees, an handsome, long, light Ladder of Firpole, a little, nimble, and strong armed Saw, and sharp. For less trees, a little and sharp hatchet, a broad mouthed Chesel, strong and sharp, with an hand beetle, your strong and sharp Clever, with a knock, and (which is a most necessary instrument amongst little trees) a great hafted and sharp knife or whittle. And as needful is a Stool on the top of the Ladder of eight or more rungs, with two back feet, whereon you may safely, and easily stand to graff, to dress, and to gather fruit, thus formed. The feet may be fast wedged in, but the Ladder must hang loose with two bands of Iron: and thus much of dressing trees for fruit, formally to profit.



CHAP. XII.

Of Soyling.

Necessity of soyling.

THere is one thing yet very necessary for to make your Orchard both better, and more lasting: Yea, so necessary, that without it your Orchard cannot last, nor prosper long, which is neglected generally both in precepts and in practice, *viz.* manuring with soyl: whereby it hapneth that when trees (amongst other evils) through want of fatness to feed them, become mossie, and in their growth are evil (or not thriving) it is either attributed to some wrong cause, as age (when indeed they are but young) or evil standing (stand they never so well) or such like, or else the cause is altogether unknown, and so not amended.

Trees great Suckers.

Can there be devised any way by nature, or art, sooner or soundlier to suck out, and take away the heart of earth, then by great trees; such great bodies cannot be sustained without great store of sap? what living body have you greater then of trees; the great Sea monsters (whereof one came to land at *Teesmouth* in

in *Yorkshire*, hard by us, 18 yards in length, and near as much in compass) seem hideous, huge, strange, and monstrous, because they be indeed great, but especially, because they are seldome seen: but a tree liking, come to his growth and age, twice that length, and of a bulk never so great, besides his other parts, is not admired, because he is so commonly seen. And doubt not, but if he were well regarded from his kernel, by succeeding ages, to his full strength, the most of them would double their measure. About fifty years ago, I heard by credible and constant reports, That in *Brookham* Park in *Westmerland*, neer unto *Penrich*, there lay a blown Oak, whose trunk was so big, that two Horse-men being the one on the one side, and the other on the other side, they could not see one another; to which, if you add his arms, boughs, and roots, and consider of his bigness, what would he have been, if preserved to the vantage? Also I read in the History of the *West-Indians*, out of *Peter Martyr*, that sixteen men taking hands one with another, were notable to fathome one of those trees about. Now nature having given to such, a faculty by large and infinite Roots, taws and tangles, to draw immediately his sustenance from our common mother the earth (which is like in this point to all other mothers that bear) hath also ordained that the tree over-laden with fruit, and wanting sap to feed all she hath brought forth, will wain all she cannot feed, like women bringing forth more Children at once then she hath teats. See you not how trees especially, by kind being great, standing so thick and close, that they cannot get plenty of sap, pine away all the grass, weeds, lesser shrubs and trees, yea, and themselves also, for want of vigour of sap? so that trees growing large, sucking the soyl whereon they stand continually and amain, and the foizon of the earth that feeds them decaying (for what is there that wastes continually, that shall not have an end?) must either have supply of sucking, or else leave thriving and growing. Some grounds will bear corn while they be new, and no longer, because their crust is shallow, and not very good, and lying they scind and wash and become barren. The ordinary corn soyls continue not fertile, without fallowing and soyling, and the best requires supply even for the little body of corn. How then can we think that any

ny Ground, how good ſoever, can ſuſtain bodies of ſuch great- Great bodies.
neſs, and ſuch great feeding, without great plenty of ſap ariſing from good earth? This is one of the chief cauſes why ſo many of our Orchards in *England* are ſo evil thriving when they come to growth, and our fruit ſo bad. Men are loath to beſtow much ground, and deſire much fruit, and will neither ſet their trees in ſufficient compaſs, nor yet feed them with manure. Therefore of neceſſity Orchards muſt be ſoyled.

The fitteſt time is, when your trees are grown great, and have neer hand ſpread your earth, wanting new earth to ſuſtain them, which if they do, they will ſeek abroad for better earth; and ſhun that which is barren (if they find better) as cattel evil paſturing. For nature hath taught every creature to deſire and ſeek his own good, and to avoid hurt. The beſt time of the year is at the fall, that the froſt may bite and make it tender, and the Rain waſh it into the roots. The Summer time is perilous if ye dig, becauſe the ſap ſtirs amain. The beſt kind of ſoyl is ſuch as is fat, hot, and tender. Your earth muſt be lightly opened, that the Dung may go in, and waſh away; and but ſhallow, leſt you hurt the Roots; and in the ſpring, cloſely and equally made plain again for fear of Suckers. I could wiſh, that after my trees have fully poſſeſſed the ſoyl of mine Orchard, that every ſeven years at leaſt, the ſoyl were beſpread with dung half a foot thick at leaſt. Puddle water out of the Dunghill poured on plentifully, will not only moiſten but fatten exceedingly in *June*, and *July*. If it be thick and fat, and applied every year, your Orchard ſhall need none other ſoiling. Your ground may lye ſo low at the River ſide, that the flood ſtanding ſome dayes and nights thereon, ſhall ſave you all this labour of ſoyling.

CHAP. XIII.

Of Annoyances.

A Chief help to make every thing good, is to avoid the evil thereof: you ſhall never attain to that good of your Orchard you look for, unleſs you have a Gardener that can diſcern the diſeaſes of your trees, and other annoyances of your Orchard, and find out the cauſes thereof, and know and apply fit Remedies for the ſame. *For be your ground ſuch plants and trees as you would wiſh, and if they be waſted with hurtful things, what*

have

have you gained, but your labour for your travel? It is with an Orchard and every tree, as with man's body. The best parts of physick for preservation of health, is to foresee and cure diseases.

Two kinds of evils in an Orchard.

All the diseases of an Orchard are of two sorts, either internal, or external. I call those inward hurts which breed on, and in, particular trees.

1 Galls.
2 Canker.
3 Mos.
4 Weakness in setting.
5 Bark bound.
6 Bark pild.
7 Worm.
8 Deadly wounds.

Galls.

Galls, Cankers, Mos, Weakness, though they be divers diseases, yet (howsoever authors think otherwise) they rise all out of the same cause.

Galls we have described with their cause and remedy; in the eleventh Chapter under the name of fretters.

Canker.

Canker is the consumption of any parts of the tree bark and wood; which also in the same place is deciphered under the title of water-boughs.

Mos.

Mos is sensible seen and known of all, the cause is pointed out in the same Chapter, in the discourse of timber-wood, and partly also the remedy: but for Mos add this, that any time in summer (the spring is best, when the cause is removed) with an Hair cloth immediately after a showr of rain, rub off your Mos, or with a piece of wood (if the mos abound) formed like a great knife.

Weakness in setting.

Weakness in the setting of your fruit shall you find there also in the same Chapter, and his remedy. All these flow from the want of Roomth in good soyl, wrong planting, Chapter seven, and evil, or no dressing.

Bark bound.

Bark bound as I think riseth of the same cause, and the best and present remedy (the causes being taken away) is with your sharp knife in the spring, length way to launce his bark thorowout 3 or 4 sides of his boul.

Worm.

The disease called the worm is thus discerned: the bark will be hollow in divers places like gall, the wood will dye and dry, and you shall see easily the bark swell: it is verily to be thought that therein is bred some Worm. I have not yet thorowly sought it out, because I was never troubled therewithall; but

onely

onely have seen such trees in divers places: I think it a Worm rather, because I see this disease in trees, bringing fruit of sweet taste, and the swelling shews as much. The remedy, (as I conjecture) is, so soon as you perceive the wound, the next Spring cut it out, bark and all, and apply Cows piss and vinegar presently, and so twice or thrice a week, for a months space: For I well perceive, if you suffer it any time, it eats the Tree or Bough round, and so kills. *Since I first wrote this treatise, I have changed my mind concerning the disease called the worm, because I read in the History of the West-Indians, that their Trees are not troubled with the disease called the Worm, or Canker, which ariseth of a raw and evil concoct'd humour, or sap. Witness* Pliny, *by reason the Country is more hot then ours; wherefore I think the best remedy is, (not disallowing the former, considering that the Worm may breed by such an humour) warm standing, sound lopping, and good dressing.*

Bark-pill'd, you shall find with his remedy, in the eleventh Chapter.

Deadly wounds are, when a man's *Arborist* wanting skil, cuts off arms, boughs or branches an inch, or (as I see sometimes) an handful, or half a foot or more from the body: *These so cut, cannot cover in any time with sap, and therefore they dye, and dying they perish the heart, and so the tree becomes hollow, and with such a deadly wound cannot live long.* Wounds. Remedy.

The remedy is, if you find him before he be perished, cut him close, as in the 11. Chapter: If he be hoal'd, cut him close, fill his wounds though never so deep, with morter well tempered, and so close at the top his wound with a Sear-cloth nailed on, that no Air nor Rain approach his wound. If he be very old, and declining, he will recover; and the hole being closed, his wound within shall not hurt him for many years.

Hurts on your trees are chiefly, Ants, Earwigs, and Caterpillars. Of Ants, and Earwigs, is said, chap. 10. *Let there be no swarm of pismire neer your tree roots, no, not in your Orchard: turn them over in a frost, and pour in water, and you kill them.*

For *Caterpillars*, the vigilant Fruiterer shall soon espy their lodging by their web, or the decay of leaves eaten round about them: And being seen, they are easily destroyed with your hand,

or rather (if your tree may ſpare it) take ſprig and all: for the red ſpeckled Butter-fly doth ever put them, being her ſperm, among the tender ſprays for better feeding, eſpecially in drought: and tread them under your feet. I like nothing of ſmoak among trees. Unnatural heats are nothing good for natural trees. *This, for Diſeaſes of particular trees.*

External hurts are either things natural, or artificial. Natural things, externally hurting Orchards.

1 Beaſts.
1 Deer.
2 Goats.
3 Sheep.
4 Hare.
5 Cony.
6 Cattel.
7 Horſe.

II Birds.
1 Bulfinch.
2 Thruſh.
3 Black-bird.
4 Crow.
5 Pye,
&c.

The other things are.

1 Winds.
2 Cold.
3 Trees.
4 Weeds.
5 Worms.
6 Moles.
7 Filth.
8 Poyſonful ſmoak.

External wilful evils are theſe.

1 Walls.
2 Trenches.
3 Other works noiſome, done in or near your Orchard.
4 Evil Neighbours.
5 A careleſs Maſter.
6 An undiſcreet, negligent, or no keeper.

See you here an whole Army of miſchiefs banded in troops againſt the moſt fruitfull trees the earth bears? aſſailing your good labours. Good things have moſt enemies.

Remedy. A skilful Fruiterer muſt put to his helping hand, and diſband, and put them to flight.

Deer, &c. For the firſt rank of beaſts, beſides your out-ſtrong fence, you muſt have a fair and ſwift Grey-hound, a Stone-bow, Gun, and if

if need require, an Apple with an hook for a Deer, and an Hare-pipe for an Hare.

Your Cherries, and other Berries, when they be ripe, will draw all the Black-birds, Thruſhes, and Mag-pies, to your Orchard. The Bull-finch is a devourer of your fruit in the bud, I have had whole Trees ſhall'd out with them in Winter time. Birds.

The beſt remedy here is a Stone-Bow, a Piece, eſpecially if you have a musket, or ſparrow-hawk in winter, to make the Black-bird ſtoop into a buſh, or hedge.

The Gardner muſt cleanſe his ſoil of all other trees, but fruit-trees, as aforeſaid, *chap.* 2. for which it is ordained; and I would eſpecially name Oaks, Elms, Aſhes, and ſuch other great wood, but that I doubt it would be taken as an admiſſion of leſſer trees; for I admit of nothing to grow in my Orchard but fruit and flowers: if ſap can hardly be good to feed our fruit-trees, ſhould we allow of any other? eſpecially thoſe that will become their Maſters, and wrong them in their lively-hood?

And though we admit without the fence, of wall-nuts in moſt plain places, Trees middle-moſt and Aſhes, or Oaks, or Elms utmoſt, ſet in comely rows equally diſtant, with fair Allies twixt row and row, to avoid the boiſterous blaſts of winds, and within them alſo others for bees, yet we admit none of theſe into your Orchard plat: other remedies then this have we none againſt the nipping froſt. Winds. Froſts.

Weeds in fertile ſoil, (becauſe the general courſe is ſo) till your trees grow great, will be noiſome, and deform your allies, walks, beds, and ſquares; your under gardeners muſt labour to keep all cleanly, and handſome from them, and all other filth, with a ſpade, weeding knives, rake with Iron teeth, a ſcraple of Iron thus formed. Weeds.

For Nettles, and ground Ivy after a ſhowr.

When weeds, ſtraw, ſticks, and all other ſcrapings are gathered together, burn them not, but bury them under your cruſt in any place of your Orchard, and they will dye, and fatten your ground.

Worms. Moals.

Worms and Moals open the earth, and let in air to the Roots of your trees, and deform your squares and walks; and feeding in the earth, being in number infinite, draw on barrenness.

Remedy.

Worms may easily be destroyed. Any Summer evening, when it is dark, after a showr with a candle you may fill bushels; but you must tread nimbly, and where you cannot come to catch them, so sift the earth with coal-ashes an inch or two thickness, and that is a plague to them, so is sharp gravel.

Moals will anger you, if your Gardner or some other moal-catcher ease you not; especially, having made their fortresses among the Roots of your Trees; you must watch her well with a Moal-spear, at morning, noon, and night: when you see her utmost hill, cast a trench betwixt her and her home, for she hath a principal mansion to dwell and breed in about *April*, which you may discern by a principal hill, wherein you may catch her, if you trench it round, and sure, and watch well; or whersoever you can discern a single passage, (for such she hath) there trench, and watch, and have her.

Wilfull annoyances must be prevented, and avoided by the love of the Master, and Fruiterer, which they bear to their Orchard.

Justice and liberality will put away evil neighbours, or evil neighbour-hood. And then, (if God bless and give success to your labours) I see not what hurt your Orchard can sustain.

CHAP. XIV.

The age of Trees.

IT is to be considered, All this treatise of trees tends to this end, that men may love and plant Orchards, whereunto there cannot be a better inducement then that they know, (or at least be perswaded) that all the benefit they shall reap thereby, whether of pleasure, or profit, shall not be for a day, or a moneth, or one, or many, but many hundred years. Of good things, the greatest, and most durable, is always the best. If therefore, out of reason, grounded upon experience, it be made (I think) manifest, but I am sure profitable, that a fruit-tree in such a soyl

and

and ſite, as is deſcribed, ſo planted and trimmed, and kept as is afore appointed, and duely ſoiled, ſhall dure a thouſand years: Why ſhould we not take pains, and be at two or three years charges, (for under ſeven years will an Orchard be perfected for the firſt planting, and in that time be brought to fruit) to reap ſuch a commodity, and ſo long laſting? The age of trees.

Let no man think this to be ſtrange, but peruſe, and conſider the reaſon. I have Apple-trees ſtanding in my little Orchard, which I have known theſe forty years, whoſe age before my time I cannot learn, it is beyond memory, though I have inquired of divers aged men of 80 years and upwards: Theſe trees, although come into my poſſeſſion very ill ordered, and miſhapen, and one of them wounded to his heart, and that deadly, (for I know it will be his death) with a wound, wherein I might have put my foot into the heart of his bulk, (now it is leſs) notwithſtanding, with that ſmall regard they have had ſince; they ſo like, that I aſſure my ſelf they are not come to their growth by more then two parts of three, which I diſcern not onely by their own growth, but alſo by comparing them with the bulk of other trees. And I find them ſhort (at leaſt) by ſo many parts in bigneſs, although I know thoſe other fruit-trees to have been much hindred in their ſtature by evil guiding. Here hence I gather thus: Gathered by reaſon out of experience.

If my trees be a hundred years old, and yet want two hundred of their growth before they leave increaſing, which make three hundred, then muſt we needs reſolve, that this three hundred years are but the third part of a trees life; becauſe, (as all things living beſides) ſo trees muſt have allowed them for their increaſe one third, another third for their ſtand, and a third part of time alſo for their decay. All which time of a tree amounts to nine hundred years; three hundred for increaſe, three hundred for his ſtand, whereof we have the term [ſtature] and three hundred for his decay: and yet I think, (for we muſt conjecture by comparing, becauſe no one man liveth to ſee the full age of trees) I am within the compaſs of his age, ſuppoſing alwayes the fore-ſaid means of preſerving his life. Conſider the age of other living Creatures: The Horſe, and moiled Ox, wrought to an untimely death, yet double the time of their increaſe. Parts of a trees age.

creaſe. A dog likewiſe increaſeth three, ſtands three at leaſt, and in as many (or rather more) decays.

Man's age. Every living thing beſtows the leaſt part of his age in his growth, and ſo muſt it needs be with trees. A man comes not to his full growth and ſtrength (by common eſtimation) before thirty years, and ſome ſlender, and clean bodies, not till forty: So long alſo ſtands his ſtrength, and ſo long alſo muſt he have allowed by courſe of nature to decay: Ever ſuppoſing that he be well kept with neceſſaries, and from, and without ſtrains, bruiſes and all other domineering diſeaſes. I will not ſay upon true report, that Phyſick holds it poſſible, that a clean body kept by theſe three Doctors, *Doctor Dyet*, *Doctor Quiet*, and *Doctor Merryman*, may live near a hundred years: Neither will I here urge the long years of *Methuſelah*, and thoſe men of that time, becauſe you will ſay, Man's dayes are ſhortned ſince the flood. But, what hath ſhortned them? God, for man's ſins; but, by means, as want of knowledge, evil Government, Riot, Gluttony, Drunkenneſs, and (to be ſhort) the encreaſe of the curſe, our ſins increaſing in an Iron and wicked age.

Now, if a man, whoſe body is nothing (in a manner) but tender rottenneſs, whoſe courſe of life cannot by any means, by Counſel, reſtraint of Laws, or puniſhment, nor hope of praiſe, profit, or eternal glory, be kept within any bounds, who is degenerate clean from his natural feeding, to effeminate niceneſs, and cloying his body with exceſs of meat, drink, ſleep, &c. and to whom nothing is ſo pleaſant, and ſo much deſired, as the cauſes of his own death, as idleneſs, luſt, &c. may live to that age: I ſee not but a tree of a ſolid ſubſtance, not damnified by heat, or cold, capable of, and ſubject to any kind of ordering, or dreſſing, that a man ſhall apply unto him, feeding naturally, as from the beginning, diſburthened of all ſuperfluities, eaſed of, and of his own accord avoiding, the cauſes that may annoy him, ſhould double the life of a man, more then twice told: and yet natural Philoſophy, and the univerſal conſent of all Hiſtories tell us, that many other living creatures far exceed man in length of years: As the Hart, and the Raven. Thus reporteth that famous *Roterdam* out of *Heſiodus*, and many other Hiſtoriographers. The teſtimony of *Cicero* in his book *De Senectute*, is weighty to this

this purpose, that we must *in posteras ætates serere arbores*, which can have none other fence, but, that our fruit-trees, whereof he speaks, can indure for many ages.

What else are trees, in comparison with the earth, but as hairs to the body of a man? And it is certain, without poysoning, evil, and distemperate dyet, and usage, or other such forcible cause, the hairs dure with the body. That they be called excrements, it is by reason of their superfluous growth: (for cut them as often as you list, and they will still come to their natural length) Not in respect of their substance, and nature. Hairs endure long, and are an ornament, and of use also to the body, as trees to the earth.

So that I resolve upon good reason, that fruit-trees well ordered, may live and like a thousand years, and bear fruit; and the longer, the more, the greater, and the better, because his vigour is proud and stronger, when his years are many. You shall see old trees put forth their buds, and blossoms, both sooner and more plentifull then young trees, by much. And I sensibly perceive my young trees to inlarge their fruit as they grow greater, both for number and greatness. Young Heifers bring not forth Calves so fair, neither are they so plentifull to milk, as when they be come to be old Kine. No good House-wife will breed of a young, but of an old breed-mother: It is so in all things naturally, therefore in trees.

And if fruit-trees last to this age, how many ages is it to be supposed, strong, and huge timber-trees will last? whose huge bodies require the years of divers *Methuselahs*, before they end their dayes, whose sap is strong and bitter, whose bark is hard and thick, and their substance solid and stiff: all which, are defences of health, and long life. Their strength withstands all forcible winds; their sap of that quality is not subject to worms and tainting; their bark receives seldome or never by casualty, any wound: And not only so, but he is free from removals, which are the death of millions of trees, whereas the fruit-tree in comparison, is little, and often blown down, his sap sweet, easily, and soon tainted, his bark tender, and soon wounded, and himself used by man, as man useth himself, that is, either unskilfully, or careleslsy. The age of Timber-trees.

It

Age of trees discerned.

It is good for some purposes, to regard the age of your fruit-trees, which you may easily know, till they come to accomplish twenty years, by his knots: Reckon from his Root upward an arm, and so to his top twig, and every years growth is distinguished from other by a knot, except lopping or removing do hinder.

CHAP. XV.

Of gathering and keeping Fruit.

General rule.

Although it be an easie matter, when God shall send it, to gather and keep fruit, yet are there certain things worthy your regard: You must gather your fruit when it is Ripe, and not before, else will it wither, and be tough and sowr. All fruits generally are Ripe, whenthey begin to fall: For trees do as all other bearers do, when their young ones are Ripe, they will wain them. The Dove her Pidgeons, the Coney her Rabbets, and Women their Children. Some fruit-trees sometimes getting a taint in the setting, with a frost, or evil wind, will cast their fruit untimely, but not before they leave giving them sap, or they leave growing: Except from this fore-said rule, Cherries, Damsons, and Bullis. The Cherry is Ripe when he is swelled, wholly Red, and sweet: Damsons and Bullis not before the first frost.

Cherries, &c.

Apples.

Apples are known to be Ripe, partly by their colour, growing towards a yellow, except the Leather-coat, and some Pears, and Greenings.

When.

Timely Summer-fruit will be ready, some at Midsummer, most at Lammas for present use; but generally, no keeping fruit before *Michaeltide*. Hard winter fruit, and Wardens longer.

Gather at the full of the Moon, for keeping, gather dry for fear of Rotting.

Dry stalks.

Gather the stalks withal, for a little wound in fruit is deadly; but not the stump, that must bear the next fruit; nor leaves, for moisture putrifies.

Severally.

Gather every kind severally by it self, for all will not keep alike, and it is hard to discern them, when they are mingled.

Over-laden trees.

If your trees be over-laden, (as they will be, being ordered, as is before taught) I like better of pulling some off, (though they be

be not ripe) neer the top end of the bough, then of propping by much, the reſt ſhall be better fed. Propping puts the boughs in danger, and frets it at leaſt.

Inſtruments: A long Ladder of light Fir, a Stool ladder, as in the eleventh Chapter. A gathering-apron like a poak before you, made of purpoſe, or a Wallet hung on a bough, or a baſket with a ſieve bottom, or skin bottom, with lathes or ſplinters under, hung in a rope to pull up and down: bruiſe none, every bruiſe is to fruit death; if you do, uſe them preſently. An hook to pull boughs to you is neceſſary. Break no boughs. Inſtruments. Bruiſes.

For keeping, lay them in a dry loft, the longeſt-keeping Apples firſt and furtheſt on dry ſtraw, on heaps, ten or fourteen dayes, thick, that they may ſweat. Then dry them with a ſoft and clean cloth, and lay them thin abroad. Long-keeping fruit would be turned once in a month ſoftly; but not in, nor immediately after froſt. In a loft, cover'd well with ſtraw, but rather with chaff or bran: For froſt doth cauſe tender rottenneſs. Keeping.

CHAP. XVI.

Of Profits.

NOw pauſe with your ſelf, and view the end of all your Labours in an Orchard: unſpeakable pleaſure, and infinite commodity. The pleaſure of an Orchard I refer to the laſt Chapter, for the concluſion; and in this Chapter, a word or two of the profit, which thorowly to declare is paſt my skill; and I account it as if a man ſhould attempt to add light to the Sun with a candle, or number the Stars. No man that hath but a mean Orchard or judgment but knows, that the commodity of an Orchard is great: Neither would I ſpeak of this, being a thing ſo manifeſt to all; but that I ſee, that through the careleſneſs of men, it is a thing generally neglected. But let them know, that they loſe hereby the chiefeſt good which belongs to houſe-keeping.

Compare the Commodity that commeth of half an acre of ground, ſet with fruit-trees and herbs, ſo as is preſcribed, and an whole acre (ſay it be two) with corn, or the beſt commodity you can wiſh, and the Orchard ſhall exceed by divers degrees.

In *France*, and ſome other Countries, and in *England*, they make great uſe of Cider and Perry, thus made: Dreſs every apple, the ſtalk, upper end, and all galls away, ſtamp them, and Cyder and Perry.

strain them, and within twenty four hours tun them up into clean, sweet, and sound vessels, for fear of evil air, which they will readily take: and if you hang a poakfull of Cloves, Mace, Nutmegs, Cinamon, Ginger, and peels of Lemons in the middest of the vessel, it will make it as wholsome and pleasant as Wine. The like usage doth Perry require.

These drinks are very wholsome; they cool, purge, and prevent hot agues. But I leave this skil to Physicians.

Fruit. The benefit of your Fruit, Roots, and Herbs, though it were but to eat and sell, is much.

Water. Water distilled of Roses, Woodbind, Angelica, are both profitable, and wondrous pleasant, and comfortable. Saffron and Licoras will yield you much.

Conserves. Conserves, and Preserves, are ornaments to your feasts, health in your Sickness, and a good help to your friend, and to your purse.

He that will not be moved with such unspeakable profits, is well worthy to want, when others abound in plenty of good things.

CHAP. XVII.

Ornaments.

ME-thinks hitherto we have but a bare Orchard for fruit, and but half good, so long as it wants those comely Ornaments that should give beauty to all our labours, and make much for the honest delight of the owner and his friends.

Delight the chief end of Orchards. For it is not to be doubted, but as God hath given man things profitable, so hath he allowed him honest comfort, delight, and recreation in all the works of his hands. Nay, all his labours under the Sun without this are troubles, and vexations of mind: For what is greedy gain, without delight, but moiling, and turmoiling in slavery? But comfortable delight, with content, is the good of every thing, and the pattern of Heaven. A morsel of bread with comfort, is better by much than a fat Ox with unquietness. And who can deny but the Principal end of an Orchard, is the honest delight of one wearied with the works of his lawful calling? The very works of, and in an Orchard and Garden, are better than the ease and rest of, and from other labours. When God had made a man after his own

An Orchard delightsome.

Image,

Image, in a perfect ſtate, and would have him to repreſent himſelf in authority, tranquillity, and pleaſure upon the earth, he placed him in *Paradiſe*. What was *Paradiſe*? but a Garden, an Orchard of trees and herbs, full of pleaſure, and nothing there but delights. The gods of the earth reſembling the great God of heaven in Authority, Majeſty, and Abundance of all things, wherein is their moſt delight? and whither do they withdraw themſelves from the troubleſome affairs of their eſtate, being tyred with the hearing and judging of litigious controverſies, choaken (as it were) with the cloſe air of their ſumptuous buildings, their ſtomacks cloyed with variety of Banquets, their ears filled and over-burthened with tedious diſcourſings? Whither, but into their Orchards, made and prepared, dreſſed and deſtinated for that purpoſe, to renew and refreſh their ſenſes, and to call home their over-wearied ſpirits? Nay, it is (no doubt) a comfort to them, to ſet open their caſements into a moſt delicate Garden and Orchard, whereby they may not only ſee that, wherein they are ſo much delighted, but alſo to give freſh, ſweet and pleaſant air to their Galleries and Chambers.

An Orchard in Paradiſe.

Cauſe of weariſomneſs.

Orchard is the remedy.

And look what theſe men do by reaſon of their greatneſs and ability, provoked with delight, the ſame doubtleſs would every of us do, if power were anſwerable to our deſires; whereby we ſhew manifeſtly, that of all other delights on earth, they that are taken by Orchards are moſt excellent, and moſt agreeing with nature.

All delights in Orchards.

For whereas every other pleaſure commonly fills ſome one of our ſenſes, and that only with delight; this makes all our ſenſes ſwim in pleaſure, and that with infinite variety, joyned with no leſs commodity.

This delights all the ſenſes.

That famous Philoſopher, and matchleſs Oratour, *M. T. C.* preſcribeth nothing more fit, to take away the tediouſneſs of three or fourſcore years, than the pleaſure of an Orchard.

Delighteth old age.

What can your eye deſire to ſee, your ears to hear, your mouth to taſte, or your noſe to ſmell, that is not to be had in an Orchard, with abundance of variety? What more delightſome than an infinite variety of ſweet ſmelling flowers, decking with ſundry colours, the green mantle of the earth, the univerſal mo-

Cauſes of delight in any Orchard.

ther of us all, ſo by them beſpotted, ſo dyed, that all the World cannot ſample them, and wherein it is more fit to admire the Dyer, then imitate his workmanſhip, colouring not onely the earth, but decking the air, and ſweetning every breath and ſpirit.

Flowers. The Roſe red, Damask, Velvet, and double double Province-Roſe, the ſweet Musk-Roſe double and ſingle, the double and ſingle white-Roſe: The fair and ſweet-ſenting Woodbine, double and ſingle, and double double. Purple Cowſlips, and double Cowſlips, and double double Cowſlips; Primroſe double and ſingle. The Violet nothing behind the beſt, for ſmelling ſweetly. A thouſand more will provoke your content.

Borders and ſquares. And all theſe by the skil of your Gardner, ſo comelily and orderly placed in your borders and ſquares, and ſo intermingled, that one looking thereon cannot but wonder to ſee, what Nature, corrected by Art, can do.

Mounts. When you behold in divers corners of your Orchard *Mounts* of ſtone or wood, curiouſly wrought within and without, or of earth covered with fruit-trees, Kentiſh Cherries, Damſons, Plums, &c. with ſtairs of precious Workmanſhip; and in ſome corner (or more) a true Dial or Clock, and ſome Antick works; and eſpecially ſilver ſounding Muſick, mixt Inſtruments, and Voices, gracing all the reſt: How will you be wrapt with Delight!

Whence you may ſhoot a Buck.
Dial.
Muſick.

Walks. Large Walks, broad and long, cloſe and open, like the *Tempe*-groves in *Theſſaly*, raiſed with gravel and ſand, having ſeats and banks of Camomile; all this delights the mind, and brings health to the body.

Seats.

Order of trees. View now with delight the works of your own hands, your fruit-trees of all ſorts, loaden with ſweet bloſſoms, and fruit of all taſtes, operations and colours; your trees ſtanding in comely order which way ſoever you look.

Your borders on every ſide hanging and dropping with Feberries, Raſpberries, Barberries, Currans; and the Roots of your trees powdred with Strawberries, Red, White, and Green, what a pleaſure is this! Your Gardner can frame your leſſer wood to the ſhape of men armed in the field, ready to give battel; of ſwift running Grey-hounds, or of well ſented and true Running

Shape of men and beaſts.

Hounds

Hounds to chaſe the Deer, or hunt the Hare. This kind of hunting ſhall not waſte your corn, nor much your coyn.

Mazes well framed a man's height, may perhaps make your friend wander in gathering of berries till he cannot recover himſelf without your help. Mazes.

To have occaſion to exerciſe within your Orchard, it ſhall be a pleaſure to have a bowling-Alley, or rather (which is more manly, and more healthful) a pair of Buts, to ſtretch your Arms. Bowling-Alley. Buts.

Roſemary and ſweet Eglantine are ſeemly Ornaments about a Door or Window, and ſo is Woodbine. Herbs.

Look Chap. 15. and you ſhall ſee the form of a Conduit; if there were two or more, it were not amiſs. Conduit.

And in mine own opinion I could highly commend your Orchard, if either through it, or hard by it, there ſhould run a pleaſant River with ſilver ſtreams, you might ſit in your Mount, and Angle a peckled Trout, ſleighty Eele, or ſome other dainty Fiſh. Or Moats, whereon you may row with a Boat, and fiſh with Nets. River. Moats.

Store of Bees in a warm and dry Bee-houſe, comely made of Fir-boards, to ſing, and ſit, and feed upon your flowers and ſprouts, make a pleaſant noiſe and ſight. For cleanly and innocent Bees, of all other things, love, and become, and thrive in an Orchard. If they thrive, (as they muſt needs, if your Gardner be skilful, and love them; for they love their friends, and hate none but their enemies) they will, beſides the pleaſure, yield great profit to pay him his wages; yea, the increaſe of twenty Stocks or Stools with other fees, will keep your Orchard. Bees.

You need not doubt their ſtings, for they hurt not whom they know, and they know their Keeper and acquaintance. If you like not to come among them, you need not doubt them; for but neer their ſtore, and in their one defence, they will not fight, and in that caſe only (and who can blame them?) they are manly, and fight deſperately. Some (as that honourable Lady at *Hacknes*, whoſe name doth much grace mine Orchard) uſe to make ſeats for them in the ſtone-walls of their Orchard, or Garden, which is good, but wood is better.

A Vine over-ſhadowing a ſeat, is very comely, though her Grapes with us ripen ſlowly. Vine.

One

Birds. Nightingale.

One chief grace that adorns an Orchard, I cannot let slip: a brood of Nightingals, who with several notes and tunes, with a strong delightsome voice out of a weak body, will bear you company night and day. She loves (and lives in) hots of woods in her heart. She will help you to cleanse your trees of Caterpillers, and all noysome worms and flyes. The gentle Robin-red-brest will help her, and in winter in the coldest storms will keep a part. Neither will the silly Wren be behind in Summer, with her distinct whistle, (like a sweet Recorder) to chear your spirits.

Robin Red-brest. Wren.

Black-bird. Thrush.

The Black-bird and Threstle (for I take it, the Thrush sings not, but devours) sing loudly in a *May* morning, and delights the ear much, and you need not want their company, if you have ripe Cherries or Berries, and would as gladly as the rest do your pleasure: but I had rather want their company than my fruit.

What shall I say? A thousand of pleasant delights are attending an Orchard: and sooner shall I be weary, than I can reckon the least part of that pleasure, which one that hath, and loves an Orchard, may find therein.

What is there of all these few that I have reckoned, which doth not pleasure the eye, the ear, the smell, and taste? And by these senses, as Organs, Pipes, and windows, these delights are carried to refresh the gentle, generous, and noble mind.

Your own labour.

To conclude, what joy may you have, that you living to such an age, shall see the blessing of God on your labours while you live, and leave behind you to heirs, or successors, (for God will make heirs) such a work, that many ages after your death shall record your love to their Country? And the rather, when you consider (Chap. 14.) to what length of time your work is to last.

FINIS.

THE *COUNTRY HOUSE-WIFE'S* GARDEN,

CONTAINING

Rules for Herbs, and Seeds, of common uſe, with their Times and Seaſons when to Set and Sow them.

Together

With the Husbandry of Bees, publiſhed with Secrets very neceſſary for every *Houſwife*: As alſo divers new Knots for Gardens.

The Contents ſee at large, in the laſt Page.

Geneſ. 2. 29.

I have given unto you every Herb, and every Tree, that ſhall be to you for meat.

LONDON,
Printed for *George Sawbridge*. 1668.

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THE COUNTRY HOUSE-WIFES GARDEN.

CHAP I.

The Soyl.

THe Soyl of an Orchard and Garden differ only in these three points: First, the Gardens soil would be somewhat dryer, because herbs being more tender then trees, can neither abide moisture nor drought, in such excessive measure as trees; and therefore having a drier soyl, the remedy is easie against drought: if need be, water soundly, which may be done with small labour, the compass of a Garden being nothing so great as of an Orchard: and this is the cause (if they know it) that Gardners raise their squares; but if moisture trouble you, I see no remedy without a general danger, except in Hops, which delight much in a low and sappy earth. Dry. Hops.

Secondly, the soyl of a Garden would be plain and level, at least every square, (for we purpose the square to be the fittest form) the reason is, the herbs of a garden wanting such helps as should stay the water, which an orchard hath, & the roots of herbs being

being mellow and loose, is soon either washt away, or sends out his heart by too much drenching and washing.

Thirdly, if a Garden soil be not clear of weeds, and namely of grass, the herbs shall never thrive; for how should good herbs prosper, when evil weeds wax so fast, considering good herbs are tender in respect of evil weeds: these being strengthned by nature, and the other by art? Gardens have small place in comparison, and therefore may more easily be followed, at the least one half year before, and the better dressed after it is framed. And you shall find that clean keeping doth not onely avoid danger of gathering weeds, but also is a special ornament, and leaves more plentifully sap for your tender herbs.

CHAP. II.

Of the Sites.

I Cannot see in any sort, how the site of the one should not be good and fit for the other: The ends of both being one, good, wholesome, and much fruit joyned with delight, unless trees be more able to abide the nipping frosts than tender herbs; but I am sure, the flowers of trees are as soon perished with cold, as any herb, except Pumpion, and Melons.

CHAP. III.

Of the Form.

LEt that which is said in the Orchards form, suffice for a Garden in general: but for special forms in squares, they are as many, as there are devices in Gardners brains. Neither is the wit and art of a skilful Gardner in this point not to be commended, that can work more variety for breeding of more delightsome choice, and of all those things, where the owner is able and desirous to be satisfied. The number of Forms, Mazes, and Knots is so great, and men are so diversly delighted, that I leave every House-wife to her self, especially seeing to set down many, had been but to fill much paper; yet lest I deprive her of all delight and direction, let her view these few, choice, new forms; and note this generally, that all plots are square, and all are bordered about with Privit, Raisins, Fea-berries, Roses, Thorn, Rosemary, Bee-flowers, Hisop, Sage, or such like.

CHAP.

The ground plot for knots.

Cinkfoil.

Flower-deluce.

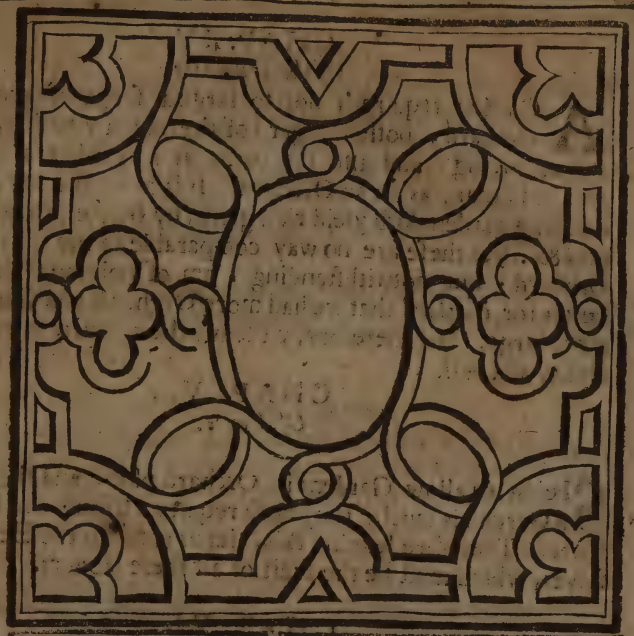
The Tre-foyl.

The frer.

Lozenges.

Cross-bow.

Diamond.



Oval.

Maze.

CHAP. IV.
Of the Quantity.

A Garden requireth not so large a scope of ground as an Orchard, both in regard of the much weeding, dressing, and removing, and also the pains in a Garden is not so well repayed home, as in an Orchard. It is to be granted, that the Kitching garden doth yield rich gains, by Berries, Roots, Cabbages, &c. yet these are no way comparable to the fruit of a Rich Orchard: but notwithstanding I am of opinion, that it were better for *England* that we had more Orchards and Gardens, and more large. And therefore, we leave the quantity to every mans ability and will.

CHAP. V.
Of Fence.

SEeing we allow Gardens in Orchard plots, and the benefit of a Garden is much, they both require a strong and shrowding fence. Therefore leaving this, let us come to the Herbs themselves, which must be the fruit of all these labours.

CHAP. VI.
Of two Gardens.

HErbs are of two sorts, and therefore it is meet, (they requiring divers manners of Husbandry) that we have two Gardens; a garden for flowers, and a Kitchin-garden; or a Summer garden: not that we mean so perfect a distinction, that we mean the Garden for flowers should or can be without herbs good for the Kitchin, or the Kitchin-garden should want flowers, nor on the contrary; but for the most part they would be severed: first, because your Garden-flowers shall suffer some disgrace, if among them you intermingle Onions, Parsnips, &c. Secondly, your Garden that is durable, must be of one form: but that which is your Kitchins use, must yield daily Roots, or other herbs, and suffer deformity. Thirdly, the herbs of both will not be both alike ready, at one time, either for gathering, or removing. First therefore

Of

Of the Summer Garden.

THese herbs and flowers are comely and durable for squares & Knots, and all to be set at *Michael-tide*, or somewhat before; that they may be setled in, and taken with the ground before winter, though they may be Set, especially sown, in the spring.

Roses of all sorts, (spoken of in the Orchard) must be Set. Some use to set slips and twine them, which sometimes, but seldome thrive all.

Rosemary, Lavender, Bee-flowers, Isop, Sage, Time, Cowslips, Piony, Daisies, Clove-Gilliflowers, Pinks, Sothernwood, Lillies, of all which hereafter.

Of the Kitchin Garden.

THough your Garden for flowers doth in a sort peculiarly challenge to it self a perfect, and exquisite form to the eyes, yet you may not altogether neglect this, where your herbs for the pot do grow: And therefore some here make comely borders with the herbs aforesaid; the rather, because abundance of Roses and Lavender, yield much profit, and comfort to the senses: Rose water, Lavender, the one cordial (as also the Violets, Burrage, and Bugloss) the other reviving the spirits by the sense of smelling, both most durable for smell, both in flowers and water: you need not here raise your beds, as in the other Garden, because Summer towards, will not let too much wet annoy you, and these herbs require more moisture: yet must you have your beds divided, that you may go betwixt to weed, and somewhat of form would be expected: To which it availeth that you place your herbs of biggest growth, by walls, or in borders, as Fennel, &c. and the lowest in the middest, as Saffron, Strawberries, Onions, &c.

CHAP. VII.
Division of Herbs.

GArden herbs are innumerable, yet these are common, and sufficient for our Country-housewives.

Herbs of greater growth.

Fennel, Angelica, Tansie, Hollihock, Lovage, Elicampane, French Mallows, Lillies, French Poppy, Endive, Succory, and Clary.

Herbs of middle growth.

Burrage, Buglos, Parsly, Sweet Sicily, Flower-deluce, Stock-Gilli-flowers, Wall-flowers, Anniseeds, Coriander, Fether-few, Mary-golds, Oculus Christi, Langdibeef, Alexanders, Carduus-benedictus.

Herbs of smaller growth.

Pansie, or Harts-ease, Coast-Marjoram, Savory, Straw-berries, Saffron, Licoras, Daffadowndillies, Leeks, Chives, Chibbals, Skerots, Onions, Bachelors buttons, Daisie, Penyroyal.

Hitherto, I have only reckoned up, and put in this rank, some Herbs: their Husbandry follows, each in an Alphabetical order, the better to be found.

CHAP. VIII.

Husbandry of Herbs.

ALexanders, are to be renewed as Angelica. It is a timely Pot-herb.

Angelica is renewed with the seed, whereof he beareth plenty the second year, and so dyeth. You may remove the roots the first year. The leaves distilled, yield water, soveraign to expel pain from the stomack. The Root dried, taken in the fall, stoppeth the pores against infection.

Anniseeds make their growth, and bear seeds the first year, and dieth as Coriander: it is good for opening the pipes, and it is used in Comfits.

Artichoaks, are renewed by dividing the Roots into Sets, in *March*, every third or fourth year. They require a several usage, and therefore a several whole plot by themselves, especially, considering they are plentifull of fruit much desired.

Burrage, and Buglos, two Cordials, renew themselves by seed yearly, which is hard to be gathered, they are exceeding good Pot-herbs, good for Bees, and most comfortable for the heart and stomack, as Quinces and Wardens.

Camomile, set roots in banks and walks, it is sweet smelling, qualifying head-ach.

Cab-

Cabbages, require great room, they seed the second year, sow them in *February*; remove them when the plants are an handfull long, set deep and wet. Look well in drought for the white Caterpillars worm, the spauns under the leaf closely; for every living Creature doth seek food and quiet shelter, and growing quick they draw to, and eat the heart: you may find them in a rainy dewy morning.

It is a good Pot-herb, and of this herb called *Cole*, our Country Housewifes give their pottage their name, and call them *Caell*.

Carduus Benedictus, or blessed thistle, seeds and dyes the first year: the excellent vertue thereof, I refer to Herbals, for we are Gardiners, not Physicians.

Carrets are sown late in *April*, or *May*, as Turneps, else they seed the first year, and then their roots are naught; the second year they dye, their root grow great, and require large room.

Chibals or Chives, have their roots parted, as Garlick, Lillies, &c. and so are they set every third or fourth year: a good pot-herb, opening, but evil for the eyes.

Clary, is sown, it seeds the second year, and dyes. It is somewhat harsh in tast, a little in pottage is good, it strengtheneth the reins.

Coast, Root parted, makes Sets in *March*, it bears the second year; it is used in Ale in *May*.

Coriander, is for usage and uses, much like Annis seeds.

Daffadowndillies, have their roots parted, and set once in three or four years, or longer time. They flower timely, and after *Midsummer* are scarcely seen. They are more for Ornament, then for use, so are Daisies.

Daisie roots parted and Set, as Flower-deluce and Camomile, when you see them grow too thick or decay. They be good to keep up, and strengthen the edges of your borders, as Pinks, they be red, white, mixt.

Elecampane Root is long lasting, as is the Lovage: it seeds yearly, you may divide the Root, and set; the Root taken in winter it is good (being dryed, powdered, and drunk) to kill itches.

Endive and Succory, are much like in nature, shape, and use,

they renew themselves by seed, as Fennel, and other herbs. You may remove them before they put forth shanks: a good Pot-herb.

Fennel is renewed, either by the seeds (which it beareth the second year, and so yearly in great abundance) sown in the fall or Spring, or by dividing one Root into many Sets, as Artichoke. It is long of growth and life. You may remove the root unshankt: It is exceeding good for the eyes, distilled, or any otherwise taken: it is used in dressing Hives for swarms, a very good Pot-herb, or for Sallets.

Fether-few shakes seed. Good against a shaking Fever, taken in a posset drink fasting.

Flower-deluce, long lasting, divide his roots, and Set: the roots dryed have a sweet smell.

Garlick may be set an handfull distance, two inches deep, in the edge of your beds. Part the head into several cloves, and every clove set in the latter end of *February*, will increase to a great head before *September*: good for opening, evil for eyes; when the blade is long, fasten two and two together, the heads will be bigger.

Hollihock riseth high, seedeth and dyeth; the chief use I know, is ornament.

Isop is reasonable long lasting: young Roots are good Set, slips better. A good pot-herb.

July-flowers, commonly called Gilly-flowers, or Clove July-flowers, (I call them so, because they flower in *July*) they have the name of Cloves, of their sent. I may well call them the King of flowers except the Rose, & the best sort of them are called Queen-July-flowers. I have of them nine or ten several colours, and divers of them as big as Roses; of all flowers (save the Damask Rose) they are the most pleasant to sight and smell, they last not past three or four years unremoved. Take the slips (without shanks) and Set any time save in extream frost, but especially at *Michael-tide*. Their use is much in ornament, and comforting the spirits, by the sense of smelling.

July-flowers of the wall, or wall July-flowers, Wall-flowers, or Bee-flowers, or Winter-July-flowers, because growing in the walls even in winter, and good for Bees, will grow even in stone-walls,

walls, they will seem dead in Summer, and yet revive in Winter, they yield seed plentifully, which you may sow at any time, or in any broken earth, especially on the top of a mud-wall, but moist; you may set the root before it be brancht, every slip that is not flowr'd will take root, or crop him in Summer, and he will flower in Winter, but his winter seed is untimely. This and Palmes are exceeding good, and timely for Bees.

Leeks yield seed the second year, unremoved, and dye, unless you remove them, usually to eat with Salt and Bread, as Onions always green, good pot-herb, evil for the eyes.

Lavender-spike would be removed within seven years, or eight at the most: slips twined, as Hysop and Sage, would take best at *Michael-tide*. This flower is good for Bees, most comfortable for swelling, except Roses: and kept dry, is as strong after a year, as when it is gathered. The water of this is comfortable.

White *Lavender* would be removed sooner.

Lettice yields seed the first year, and dyes: sow betime, and if you would have them Cabbage for sallets, remove them as you do Cabbage. They are usual in Sallets and in the pot.

Lillies white and red, remove once in three or four years, their roots yield many Sets, like the Garlick. *Michael-tide* is the best. They grow high, after they get root. These roots are good to break a boil, as are Mallows and Sorrel.

Mallows, French or gagged, the first or second year, seed plentifully. Sow in *March*, or before. They are good for the housewifes pot, or to break a bunch.

Marigolds, most commonly come of seed, you may remove the Plants when they are two inches long. The double Marigold, being as big as a little Rose, is good for shew. They are a good Pot-herb.

Oculus Christi, or Christs-eye, seeds, and dyes the first or second year: you may remove the young Plants, but seed is better. One of these seeds put into the eye, within three or four hours will gather a thick skin, clear the eye, and bolt it self forth without hurt to the eye. A good Pot-herb.

Onions are sown in *February*, they are gathered at *Michael-tide*, and all the Summer long, for Sallet; as also young Parsly,

Sage,

Sage, Chibals, Lettice, sweet Sicily, Fennel, &c. good alone, or with meat, as muttons, &c. for sawce, especially for the pot.

Parsly sow the first year, and use the next year; it seeds plentifully, an herb of much use, as sweet Sicily is. The seed and roots are good against the stone.

Parsnips require an whole plot, they be plentiful and common, sow them in *February*, the King's (that is in the middle) seed broadest and reddest. Parsnips are sustenance for a strong stomack, not good for evil eyes: When they cover the earth, in a drought to tread the tops, makes the Roots bigger.

Penny-royal, or pudding grass, creeps along the ground, like ground Ivy. It lasts lost, like daisies, because it puts and spreads daily new roots. Divide, and remove the roots, it hath a pleasant tast and smel, good for the pot, or hacktmeat, or a Haggas pudding.

Pumpions, set Seeds with your finger, a finger deep, late in *March*, and so soon as they appear, every night if you doubt frost, cover them, and water them continually out of a water pot: they be very tender, their fruit is great and waterish.

French-Poppy beareth a great flower, and the seed will make you sleep.

Raddish is sauce for cloyed stomacks, as Capers, Olives, and Cucumbers; cast their seeds all summer long here and there, and you shall have them always young and fresh.

Rosemary, the grace of herbs here in *England*, in other Countries common. To set slips immediately after *Lammas*, is the surest way. Seed sown may prove well, so they be sown in hot weather, somewhat moist, and good earth: for the herb, though great, is nesh and tender (as I take it) brought from hot Countries to us in the cold North: set thin, it becomes a window well. The use is much in meats, more in Physick, most for Bees.

Rue, or herb of grace, continually green, the slips are set. It lasts long, as Rosemary, Sothernwood, &c. too strong for mine Housewifes pot, unless she will brew Ale therewith, against the plague: let them not seed if you will have him last.

Saffron, every third year his roots would be removed at *Midsummer*, for when all other herbs grow most, it dyeth. It flowreth at *Michael-tide*, and groweth all winter: keep his flowers from birds in the morning, and gather the yellow, (for they

they shape much like Lillies) dry, and after dry them, they be precious, expelling diseases from the heart and stomack.

Savory, seeds and dyes the first year, good for my Housewifes pot and pye.

Sage, set slips in *May*, and they grow aye; let it not seed, it will last the longer. The use is much and common. The Monkish proverb is *tritum*.

Cur moritur homo, cut salvia crescit in horto?

Skerots, the Roots are set when they be parted, as *Piony*, and Flower-deluce at *Michael-tide*, the Root is but small and very sweet, I know none other special use but the Table.

Sweet *Sicily*, long lasting, pleasantly tasting, either the seed sown, or the root parted, or removed, makes increase, it is of like use with parsley.

Strawberries, long lasting, set Roots at *Michael-tide*, or the Spring, they be red, white and green, and ripe, when they be great and soft, some by *Midsummer with us*. The use is, they will cool my Housewife well, if they be put in Wine or Cream with Sugar.

Time, both seeds, slips, and Roots are good, if it seed not, it will last three or four years or more, it smelleth comfortably. It hath much use, namely, in all cold meats, it is good for Bees.

Turnip, is sown: In the second year they bear plenty of seed; they require the same time of sowing that Carrets do; they are sick of the same disease that Cabbages be. The root increaseth much, it is most wholesome, if it be sown in a good and well tempered earth; Soveraign for eyes and bees.

I reckon these herbs onely, because I teach my Country Housewife, not skilful Artists; and it should be an endless labour, and would make the matter tedious to reckon up *Landtheef*, *Stock-Gilly-flowers*, *Charvel*, *Valerian*, *Go to bed at noon*, *Piony*, *Licoras*, *Tansie*, *Garden mints*, *Germander*, *Centaury*, and a thousand such Physick herbs. Let her first grow cunning in this, and then she may inlarge her Garden as her skil and ability increaseth. And to help her the more, I have set down these Observations.

CHAP.

CHAP. IX.

General rules in Gardening.

IN the South parts, Gardening may be more timely, and more safely done, then with us in *Yorkshire*, because our air is not so favourable, nor our ground so good.

2. Secondly, most seeds shake, by turning the good earth, are renewed, their Mother the earth keeping them in her bowels, till the Sun their Father can reach them with his heat.

3. In setting herbs, leave no top more then a handful above the ground, nor more then a foot under the earth.

4. Twine the roots of those slips you set, if they will abide it. Gilly-flowers are too tender.

5. Set moist, and sow dry.

6. Set slips without shanks at any time, except at *Midsummer*, and in frosts.

7. Seeding spoils the most roots, as drawing the heart and sap from the root.

8. Gather for the pot and medicines, herbs tender and green, the sap being in the top, but in Winter the root is best.

9. All the herbs in the Garden for flowers would once in seven years be renewed, or soundly watered with puddle water, except Rosemary.

10. In all your Gardens and Orchards, banks and Seats of Camomile, Penny-royal, Daisies and Violets, are seemly and comfortable.

11. These require whole plots, Artichoaks, Cabbages, Turnips, Parsnips, Onions, Carrets, and (if you will) Saffron and Skerrits.

12. Gather all your seeds, dead, ripe, and dry.

13. Lay not dung to the roots of your herbs, as usually they do: for dung not melted is too hot even for Trees.

14. Thin setting and sowing (so the roots stand not past a foot distance) is profitable, for the herbs will like the better. Greater herbs would have more distance.

15. Set and sow herbs in their time of growth, (except at *Midsummer*,

summer, for then they are too tender) but trees in their time of rest.

16. A good Housewife may, and will gather store of herbs for the pot, about Lammas, and dry them, and pound them, and in winter they will do good service.

Thus have I limmed out a Garden to our Country Housewives, and given them Rules for common herbs. If any of them (as sometimes they are) be knotty, I refer them to Chap. 3. The skill and pains of weeding the Garden with weeding knives of fingers, I refer to themselves, and their maids, willing them to take the opportunity after a shower of rain; withall, I advise the Mistris either to be present her self, or to teach her maids to know herbs from weeds.

CHAP. X.

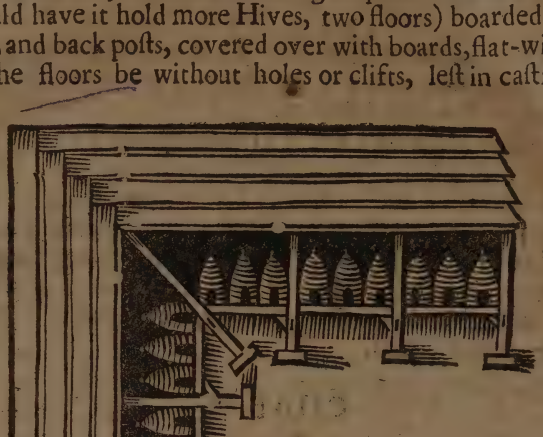
The Husbandry of Bees.

THere remaineth one necessary thing to be prescribed, which in mine opinion makes as much for ornament, as either flowers, or form, or cleanness, and I am sure as commodious as any of, or all the rest: which is Bees, well ordered. And I will not account her any of my good House-wives, that wanteth either Bees, or skilfulness about them. And though I know some have written well, and truly, and others more plentifully upon this theme: yet somewhat have I learned by experience, (being a Bee-master my self) which hitherto I cannot find put into writing, for which I think our House-Wives will count themselves beholding unto me.

The first thing that a Gardener about Bees must be carefull for, is, an house, not stakes and stones abroad, *Sub dio:* for stakes rot and reel; Rain and weather eat your hivers and covers, and cold most of all is hurtful for your Bees. Therefore you must have an house made along a sure dry wall in your Garden, near, or in your Orchard: For Bees love flowers and wood with their hearts. Bee-houses.

This the form; a Frame ſtanding on poſts with one floor (if you would have it hold more Hives, two floors) boarded, laid on bearers, and back poſts, covered over with boards, flat-wiſe.

Let the floors be without holes or clifts, leſt in caſting time



the Bees lye out and loyter.

And though your Hives ſtand within an hand breadth the one of another, yet will Bees know their home.

In this frame may your Bees ſtand dry and warm, eſpecially if you make doors, like doors of windows, to ſhroud them in winter, as in an houſe: provided you leave the hives mouth open. I my ſelf have deviſed ſuch an houſe, and I find that it ſtrengthens my Bees much, and my hives will laſt ſix to one.

Hives. Mr. *Markham* commends hives of wood; I diſcommend them not: but ſtraw hives are in uſe with us, and I think, with all the world, which I commend for nimbleneſs, cloſeneſs, warmneſs, and dryneſs. Bees love no external motions of daubing, or ſuch like. Sometimes occaſion ſhall be offered to lift and turn hives, as ſhall appear hereafter. One light entire hive

hive of straw, in that case, is better than one that is daubed, weighty, and cumbersome. I wish every hive, for a keeping swarm, to hold three pecks at least by measure; for too little hives procure bees, in casting time, either to lye out, and loyter, or else to cast before they be ripe, and strong, and so make weak swarms, and untimely: whereas if they have room sufficient, they ripen timely, and casting seasonably, are strong, and fit for labour presently. Neither would the hive be too great, for then they loyter, and waste meat and time.

Your Bees delight in wood, for feeding, especially for casting, therefore want not an Orchard. A *May*'s swarm is worth a Mares Foal: if they want wood, they be in danger of flying away. Any time before *Midsummer* is good for casting, and timely; before *July* is not evil. I much like Mr. *Markham*'s opinion, for having a swarm in combs of a dead or forsaken hive, so they be fresh and cleanly. To think, that a swarm of your own, or others, will of it self come into any such hive, is a meer conceit, *Experto crede Roberto*. His smearing with hony, is to no purpose, for the other Bees will eat it up. If your swarm knit in the top of a tree, as they will, if the wind beat them not to fall down, let the stool or ladder prescribed in the Orchard do you service. Hiving of Bees.

The less your Spelks are, the less is the wast of your honey, and the more easily will they draw, when you take your Bees. Four Spelks athwart, and one top Spelk are sufficient. The Bees will fasten their combs to the hive. A little Honey is good, but if you want, Fennel will serve to rub your hive withall. The Hive being drest, and ready spelkt, rub'd, and the hole made for their passage, (I use no hole in the Hive, but a piece of wood hoal'd, to save the Hive, and keep out mice) shake in your Bees, or the most of them (for all commonly you cannot get) the remainder will follow. Many use smoak, nettles, &c. which I utterly dislike: for Bees love not to be molested. Ringing in the time of casting is a meer fancy; violent handling of them is simply evil, because Bees of all other creatures love cleanliness, and peace. Therefore handle them leisurely, and quietly, and their Keeper, whom they know, may do with them what he will without hurt: Being hived at night, bring them to their seat. Set your hives all of one year together. Spelks.

Signs of breeding, if they be strong.

1 They will avoid dead young Bees and Droans.

2 They will sweat in the morning, till it run from them, always when they be strong.

Signs of casting.

1 They will fly Droans by reason of heat.

2 The young Swarm will once or twice in some fair season come forth mustring, as though they would cast, to prove themselves, and go in again.

3 The night before they cast, if you lay your ear to the hives mouth, you shall hear two or three, but especially one above the rest, cry, Up, up, up, or Tout, tout, tout, like a Trumpet sounding the alarum to the battel.

Much descanting there is of, and about the master Bee, and their degrees, order, and Goverment: but the truth in this point is rather imagined, then demonstrated. There are some conjectures of it, *viz.* we see in the combs divers greater houses then the rest, and we commonly hear the night before they cast, sometime one Bee, sometime two or more Bees, give a loud and several sound from the rest, and sometimes Bees of greater bodies than the common sort: but what of all this? I lean not on conjectures, but love to set down what I know to be true, and leave these things to them that love to divine.

Keep none weak, for it is hazard oftentimes with loss. Feeding will not help them: for being weak, they cannot come down to meat, if they come down, they dye, because weak Bees cannot abide cold. If none of these, yet will the other Bees, being strong, smell the honey, and come, and spoil, and kill them. Some help is in casting time, to put two weak swarms together, or as Mr. *Markham* well saith, Let them not cast late, by raising them with wood, or stone, but with imps (say I.) An imp is, three or four wreaths wrought as the Hive, the same compass, to raise the Hive withall: but by experience in tryal, I have found out a better way by Clustring, for late or weak swarms; hitherto not found out of any that I know. That is this: After casting time, if I have any stock proud, and hindred from timely casting, with former Winters poverty, or evil weather in casting time, with two handles and crooks fitted for the purpose, I turn up that stock so pestered

Catching.

Clustring.

red with Bees, and set it on the crown, upon which so turned with the mouth upward, I place another empty hive well drest, and spelkt, into which, without any labour, the swarm that would not depart, and cast, will presently ascend, because the old Bees have this quality (as all other breeding creatures have) to expel the young, when they have brought them up.

There will the Swarm build as kindly, as if they had of themselves been cast. But be sure you lay betwixt the Hives some straight and cleanly stick, or sticks, or rather a board with holes, to keep them asunder: otherwise they will joyn their works together so fast, that they cannot be parted. If you so keep them asunder at *Michael-tide*, if you like the weight of your swarm (for the goodness of swarms is tried by the weight) so cache't, you may set it by for a stock to keep. Take heed in any case the combs be not broken, for then the other Bees will smell the honey, and spoil them. This have I tried to be very profitable for the saving of Bees.

The Instrument hath this form. The great straight piece of wood,

the rest are iron clasps & nails, the clasps are loose in the staple, two men with two of these fastned to the Hive, will easily turn it up.

They gather not till *July*; for then they be discharged of their young, or else they are become now strong to labour; and now sap in flowers is strong and proud, by reason of time, and force of Sun. And now also in the North (and not before) the herbs of greatest vigour put forth their flowers; as Beans, Fennel, Burrage, &c.

The most sensible weather for them, is heat and draught, because the nesh Bee can neither abide cold nor wet; and showrs (which they well fore-see) do interrupt their labours, unless they fall in the night, and so they further them.

After casting *Time*, you shall benefit your stocks much, if you help them to kill their Droans, which by all probability and judgment, are an idle kind of Bees, and wastful. Some say they breed, and have seen young Droans in taking their honey, which I know is true. But I am of opinion, that there are also Bees which Droans.

which have lost their stings, and so being as it were gelded, become idle and great: there is great use of them. *Deus & natura nihil fecet frustra.* "They hate the bees, and cause them cast the "sooner; they never come forth, but when they be over-heated; "they never come home loaden. After casting time, and when the bees want meat, "You shall see the labouring Bees fasten on them, "two, three, or four at once, as if they were theeves to be led to "the Gallows, and killing them, they cast them out, and draw "them far from home, as hateful enemies. Our House-wife, if she be the keeper of her own bees (as she had need to be) may with her bare hand in the heat of the day safely destroy them in the hives mouth. Some use towards night, in a hot day, to set before the mouth of the hive a thin board with little holes in it, at which the lesser Bees may enter, but not the Droans; so that you may kill them at your pleasure.

Annoyances. Snails spoil them by night like theeves: they come so quietly, and are so fast, that the Bees fear them not; look early and late, especially in a rainy or dewy evening or morning.

Mice are no less hurtfull, and the rather to Hives of straw: and therefore coverings of straw draw them: they will in, either at the mouth, or shear themselves an hole: The remedy is good Cats, Rats-bane, and Watching.

The cleanly Bee hateth the smoak as poyson; therefore let your bees stand neerer your Garden, then your Brew-house or Kitchen.

They say Sparrows and Swallows are enemies to Bees, but I see it not.

More Hives perish by Winters cold, then by all other hurts: for the Bee is tender and nice, and only lives in warm weather, and dyes in cold: And therefore, let my House-wife be perswaded, that a warm dry house before described, is the chiefest help she can make her bees against this, and many more mischiefs. Many use against cold in Winter, to stop up their hive close; and some set them in houses, perswading themselves, that thereby they relieve their bees. First, tossing, moving, is hurtfull. Secondly, in houses, going, knocking, & shaking is noisome. Thirdly, too much heat in an house is unnatural for them: But lastly, and especially, Bees cannot abide to be stopt up close; for at every warm season of the Sun they revive, and living eat, and eating must needs purge

purge abroad : in her house the cleanly Bee will not purge her self. Judge you what it is for any living creature, not to disburthen nature. Being shut up in calm seasons, lay your ear to the Hive, and you shall hear them yearn and yell, as so many hundred prisoners. Therefore impound not your Bees, so profitable and free a creature.

Let none stand above three years, else the combs will be black and knotty, your honey will be thin and uncleanly ; and if any cast after three years, it is such as have swarms of old bees, kept all together, which is great loss. Smoaking with Raggs, Rozen, or Brimstone, many use ; some use drowning in a tub of clean water, and the water well brew'd, will be good botchet. Draw out your spelks immediately with a pair of pinchers, lest the Wood grow soft, and swell, and so will not be drawn, then must you cut your hive. Taking of Bees.

Let no fire come near your honey, for fire softneth the wax, and dross, and makes them run with the honey : Fire softneth, weakneth, and hindreth honey from purging. Break your combs small, when the dead empty combs are parted from the loaden combs, into a sieve, born over a great bowl, or vessel with two staves, and so let it run two or three dayes : The sooner you tun it up, the better will it purge. Run your Swarm honey by it self, and that shall be your best. The elder your Hives are, the worse is your honey. Straining Honey.

Usual Vessels are of Clay, but after wood be satiated with Honey (for it will leak at first: for honey is marvelously searching, though thick, and therefore vertuous) I use it rather, because it will not break so soon with falls, frosts, or otherwise, and greater vessels of clay will hardly last. Vessels.

When you use your Honey, with a spoon take off the skin, which it hath put up.

And it is worth the regard, that bees thus used, if you have but forty stocks, shall yield you more commodity clearly than forty Acres of Ground.

And thus much may suffice, to make good Housewifes love, and have good Gardens and Bees.

Deo laus.

The

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A

MOST PROFITABLE

New Treatiſe, from approved Experience, of the Art of Propagating Plants.

BY

SIMON HARWARD.

CHAP. I.

The Art of Propagating Plants.

THere are four ſorts of Planting or Propagating, as in laying of ſhoots or little branches, whiles they are yet tender, in ſome pit made at their foot, as ſhall be ſaid hereafter, or upon a little ladder or basket of earth, tied to the bottom of the branch, or in boaring a Willow through, and putting the branch of the tree into the hole, as ſhall be fully declared in the Chapter of Grafting.

There are likewiſe Seaſons to Propagate in, but the beſt is in 1.

the Spring, and *March*, when the trees are in the flowre, and do begin to grow lusty. The young planted Cyens or little grafts must be propagated in the beginning of Winter, a foot deep in the earth, and good manure mingled amongst the earth, which you shall cast forth of the pit wherein you mean to propagate it, to fumble it in upon it again. In like manner, your superfluous Cyens, or little plants must be cut close by the earth, when as they grow about some small Imp, which we mean to propagate, for they will do nothing but rot: For to propagate, you must dig the earth round about the tree, that so your roots may be laid in a manner half-bare. Afterwards draw into length the pit on that side where you mean to propagate, and according as you perceive that the roots will be best able to yield, and be governed in the same pit, to use them, and that with all gentleness, and stop close your Cyens, in such sort, as that the wreath which is in the place where it is grafted, may be a little lower than the Cyens of the new wood growing out of the earth, even so high as it possible may be. If the trees that you would propagate be somewhat thick, and thereby the harder to ply, and somewhat stiff to lay in the pit; then you may wet the stock almost to the midst, betwixt the root and the wreathing place, so with gentle handling of it, bow down into the pit the wood which the grafts have put forth, and that in as round a compass as you can, keeping you from breaking of it; afterward lay over the cut with gummed wax, or with gravel and sand.

2.

CHAP. II.

Grafting in the Bark.

GRafting in the Bark, is used from mid *August*, to the beginning of Winter, and also when the Western wind beginneth to blow, being from the 7 of *February*, unto the 11 of *June*. But there must be had care, not to graff in the bark in any rainy season, because it would wash away the matter of joyning the one and the other together, and so hinder it.

Grafting in the bud is used in the Summer time, from the end of *May* untill *August*, as being the time when the trees are strong and lusty, and full of sap and leaves. To wit, in a hot Country,

Country, from the midst of *June* unto the midst of *July*, but in cold countries to the midst of *August*, after some small showrs of Rain.

If the Summer be so exceedingly dry, as that some trees do withhold their sap, you must wait the time till it do return.

Graft from the full of the Moon, untill the end of the old.

You may graft in a cleft, without having regard to Rain, for the sap will keep it off.

You may graft from mid *August*, to the beginning of *November*: Cows dung with straw doth mightily preserve the graft.

It is better to graft in the evening than the morning.

The furniture and tools of a Grafter, are a basket to lay his grafts in, Clay, Gravel, Sand, or strong Earth to draw over the plants cloven, Mos, Woollen cloaths, barks of Willow to joyn to the late things and earth before spoken, and to keep them fast: Oziers to tye again upon the bark, to keep them firm and fast, gummed Wax to dress and cover the ends and tops of the grafts newly cut, that so the rain and cold may not hurt them, neither yet the sap rising from below, be constrained to return again unto the shoots. A little Saw or hand-Saw, to saw off the stock of the plants; a little Knife or Pen-knife to graff, and to cut and sharpen the grafts, that so the bark may not peel nor be broken; which often commeth to pass when the graft is full of sap. You shall cut the graff so long, as that it may fill the cliff of the plant, and therewithall it must be left thicker on the bark-side, that so it may fill up both the cliff and other incisions, as any need is to be made, which must be alwayes well ground, well burnished without all rust. Two wedges, the one broad for thick trees, the other narrow for less and tender trees, both of them of box, or some other hard and smooth wood, or steel, or of very hard iron, that so they may need less labour in making them sharp.

A little hand-bill to set the plants at more liberty, by cutting off superfluous boughs, helved of Ivory, box, or bratil.

CHAP. III.

Grafting in the Cleft.

THe manner of Grafting in a Cleft, to wit, the ſtock being cloven, is proper not only to trees, which are as great as a man's legs or arms, but alſo to greater. It is true, that being trees cannot eaſily be cloven, in their ſtock: that therefore it is expedient to make inciſion in ſome one of their branches, and not in the main body, as we ſee to be practiſed in great Apple-trees, and great Pear-trees, and as we have already declared heretofore.

To graft in the cleft, you muſt make choice of a graft that is full of ſap and juyce, but it muſt not be but till from after *January* untill *March*: And you muſt not thus graft in any tree that is already budded, becauſe a great part of the juyce and ſap would be already mounted up on high, and riſen to the top, and there diſperſed and ſcattered hither and thither, into every ſprig and twig, and uſe nothing welcome to the graft.

You muſt likewiſe be reſolved not to gather your graft the day you graft in, but ten or twelve dayes before; for otherwiſe, if you graft it new gathered, it will not be able eaſily to incorporate it ſelf with the body, and ſtock, where it ſhall be grafted, becauſe that ſome part of it will dry, and by this means will be a hindrance in the ſtock to the riſing up of the ſap, which it ſhould communicate unto the graft, for the making of it to put forth, and whereas the dryed part will fall a crumbling, and breaking through his rottenneſs, it will cauſe to remain a concavity, or hollow place in the ſtock, which will be an occaſion of a like inconvenience to befall the graft. Moreover, the graft being new and tender, might eaſily be hurt of the bands, which are of neceſſity to be tyed about the Stock, to keep the graft firm and faſt. And you muſt further ſee, that your Plant was not of late removed, but that it have already fully taken Root.

7. When you are minded to graft many grafts into one Cleft, you muſt ſee that they be cut in the end all alike.

See that the grafts be of one length, or not much differing, and it is enough, that they have three or four eylets without the Wrench when the Plant is once ſawed, and lopped off all his bran-

branches, if it have many: then you must leave but two at the most before you come to the cleaving of it; then put to your little Saw, or your Knife, or other edged tool that is very sharp, cleave it quite thorough the middest in gentle and soft sort: First, tying the stock very sure, that so it may not cleave further then is need; and then put to your wedges into the cleft untill such time as you have set in your grafts, and in cleaving of it, hold the Knife with the one hand, and the tree with the other, to help to keep it from cleaving too far. Afterwards put in your wedge of Box, or Brasil, or Bone, at the small end, so that you may the better take it out again when you have set in your grafts.

If the stock be cloven, or the bark loosed too much from the wood, then cleave it down lower, and set your grafts in, and look that their Incision be fit, and very justly answerable to the cleft, and that the two saps, first, of the plant and graft, be right and even set one against the other, and so handsomely fitted, as that there may not be the least appearance of any cut or cleft. For if they do not thus jump one with another, they will never take one with another, because they cannot work their seeming matter, and as it were cartilaginous glue in convenient sort or manner to the gluing of their joynts together. You must likewise beware not to make your cleft overthwart the pitch, but somewhat aside.

The bark of your plant being thicker than that of your graft, you must set the graft so much the more outwardly in the cleft, that so the two saps may in any case be joyned, and set right the one with the other, but the rind of the plant must be somewhat more out than that of the grafts or cloven side.

10. To the end that you may not fail of this work of imping, you must principally take heed, not to over-cleave the stocks of your trees. But before you widen the cleft with your wedges, bind and go about the stock with two or three turns, and that with an Ozier, close drawn together, underneath the same place, where you would have your cleft to end, that so your stock cleave not too far, which is a very usual cause of the miscarrying of grafts, insomuch as hereby the cleft standeth so wide and open, as that it cannot be shut, and so not grow together again; but in the mean time spend it self, and breaketh out all his life in that

that place which is the cauſe that the ſtock and the Graft are both ſplit. And this falleth out moſt often in plum-trees, and branches of trees. You muſt be carefull to joyn the rinds of your grafts and plants, that nothing may continue open, to the end that the wind, moiſture of the Clay or Rain running upon the grafted place, do not get in: when the plant cleaveth very ſtreight, there is not any danger nor hardneſs in ſloping down the graft.

10. If you leave it ſomewhat uneven or rough in ſome places, or that the ſaps both of the one and the other may the better grow, and be glewed together, when your grafts are once well joyned to our plants, draw out your wedges very ſoftly, leſt you diſplace them again: you may leave therewith in the cleft ſome ſmall end of a wedge of green wood, cutting it very cloſe with the head of the Stock: Some caſt glue into the cleft, ſome ſugar, and ſome gummed Wax.

11. If the Stock of the Plant, whereupon you intend to graft, be not ſo thick as your graft, you ſhall graft it after the faſhion of a Goats foot, make a cleft in the ſtock of the plant, not direct, but byas, and that ſmooth and even, not rough: then apply and make faſt thereto the graft with all his bark on, and anſwering to the bark of the Plant. This being done, cover the place with the fat earth and moſs of the Woods tyed together with a ſtrong band: ſtick a pole of Wood by it to keep it ſtedfaſt.

CHAP. IV.

Grafting like a Scutcheon.

IN grafting after the manner of a Scutcheon, you ſhall not vary not differ much from that of the Flute or pipe, ſave onely that the Scutcheon-like graft having one eylet, as the other hath, yet the wood of the tree whereupon the Scutcheon-like graft is grafted hath not any knob, or bud, as the wood whereupon the graft is grafted after the manner of a pipe.

12. In Summer, when the trees are well repleniſhed with ſap, and that their new Cyens begin to grow ſomewhat hard, you ſhall take a ſhoot at the end of the chief branches of ſome noble and reclaimed trees, whereof you would fain have ſome fruit, and not many of his old ſtore or wood, and from thence raiſe a good eylet, the tail and all thereof to make your grafts. But when you chuſe, take the thickeſt, and groſſeſt, divide the tail in the

the midſt before you do any thing elſe, caſting away the leaf (if it be not a pear-plum-tree, for that would have two or three leaves) without removing any more of the ſaid tail; afterward with the point of a ſharp knife, cut off the Bark of the ſaid ſhoot, the pattern of a ſhield, of the length of a nail.

In which there is onely one eyſet higher than the midſt, together with the reſidue of the tail which you left behind; and for the lifting up of the ſaid graft in Scutcheon, after that you have cut the bark of the ſhoot round about, without cutting of the wood within, you muſt take it gently with your thumb, and in putting it away you muſt preſs upon the wood from which you pull it, that ſo you may bring the bud and all away together with the Scutcheon; for if you leave it behind with the wood, then were the Scutcheon nothing worth. You ſhall find out if the Scutcheon be nothing worth, if looking within when it is pulled away from the wood of the ſame ſuit, you find it to have a hole within, but more manifeſtly, if the bud do ſtay behind in the wood, which ought to have been in the Scutcheon. 13.

Thus your Scutcheon being well raiſed and taken off, hold it a little by the tail betwixt your lips, without wetting of it, even untill you have cut the bark of the tree where you would graft it, and look that it be cut without any wounding of the wood within, after the manner of a crutch, but ſomewhat longer than the Scutcheon that you have to ſet in it, and in no place cutting the wood within; after you have made inciſion, you muſt open it, and make it gape wide on both ſides, but in all manner of gentle handling, & that with a little Sizers of bone, and ſeparating the wood and the bark a little within, even ſo much as your Scutcheon is in length and breadth: you muſt take heed that in doing hereof, you do not hurt the bark. 14.

This done, take your Scutcheon by the end, and your tail which you have left remaining, and put into your inciſion made in your tree, lifting up ſoftly your two ſides of the inciſion with your ſaid Sizers of bone, and cauſe the ſaid Scutcheon to joyn, and lye as cloſe as may be, with the wood of the tree, being cut as aforeſaid, in waying a little upon the end of your rind ſo cut; and let the upper part of your Scutcheon lye cloſe unto the upper end of your inciſion, or bark of your ſaid tree: afterwards 15.

bind

bind your Scutcheon about with a band of Hemp, as thick as a pen of a quill, more or leſs, according as your tree is ſmall or great, taking the ſame Hemp in the middeſt, to the end that either part of it may perform a like ſervice; and wreathing and binding of the ſaid Scutcheon into the inciſion of a tree, and it muſt not be tyed too ſtreight, for that will keep it from taking, the joyning of the one ſap with the other being hindred thereby, and neither the Scutcheon nor yet the Hemp muſt be moiſt or wet; and the more juſtly to bind them together, begin at the back-ſide of the tree, right over againſt the middeſt of the inciſion, and from thence come forword to joyn them before, above the eylet and tail of the Scutcheon, croſſing your band of Hemp ſo oft as the two ends meet, and from thence returning back again, come about and tye it likewiſe underneath the eylets, and thus caſt about your band ſtill backward and forward untill the whole clift of the inciſion be covered above and below

17. with the ſaid Hemp, the eylet onely excepted, and his tail, which muſt not be covered at all; his tail will fall away one part after another, and that ſhortly after the ingrafting, if ſo be the Scutcheon will take. Leave your Trees and Scutcheons thus bound for the ſpace of one month, and the thicker, a great deal longer time. Afterward look them over, and if you perceive them to grow together, untie them, or at leaſtwiſe cut the Hemp behind them, and leave them uncovered. Cut alſo your branch two or three fingers above that, that ſo the imp may proſper the better; and thus let them remain till after winter, about the month of *March* and *April*.

18. If you perceive that the bud of your Scutcheon do ſwell and come forward, then cut off the tree three fingers or thereabouts, above the Scutcheon; for if it be cut off too near the Scutcheon, at ſuch time as it putteth forth his firſt bloſſom, it would be a means greatly to hinder the flowing of it, and cauſe alſo that it ſhould not thrive and proſper well: after that one year is paſt, and that the ſhoot beginneth to be ſtrong, beginning to put forth the ſecond bud and bloſſom, you muſt go forward to cut off in byas-wiſe the three fingers in the top of the tree which you left there, when you cut it in the year going before, as hath been ſaid.

When

When your ſhoot ſhall have put forth a great deal of length, you may ſtick down there, even hard joyned thereunto, little ſtakes, tying them together very gently and eaſily; and theſe ſhall ſtay your ſhoots and prop them up, letting the wind from doing any harm unto them. Thus you may graft white Roſes in red, and red in white. Thus you may graft two or three Scutcheons, provided that they be all of one ſide; for they will not be ſet equally together in height, becauſe then they would be all ſtarvelings; neither ſhould they be directly one over another; for the lower would ſtay the riſing up of the ſap of the Tree, and ſo thoſe above ſhould conſume in penury, and undergo the aforeſaid inconvenience. You muſt note, that the Scutcheon which is gathered from the Cyen of a tree whoſe fruit is ſowr, muſt be cut in ſquare form, and not in the plain faſhion of a Scutcheon. It is ordinary to graff the ſweet Quince-Tree, baſtard Peach-tree, Apricock-tree, Jujube-tree, ſowr Cherry-tree, ſweet Cherry-tree, and Cheſtnut-tree, after this faſhion, howbeit they may be grafted in the cleft more eaſily, and more profitably; although divers be of a contrary opinion, as thus: Take the grafts of ſweet Quince-tree, and Baſtard Peach-tree, of the faireſt wood, and beſt fed that you can find, growing upon the wood of two years old, becauſe the wood is not ſo firm and ſolid as the others, and you ſhall graft them upon ſmall Plum-tree ſtocks, being of the thickneſs of ones thumb; theſe you ſhall cut after the manner of a Goats foot: you ſhall not go about to make the cleft of any more ſides then one, being about a foot high from the ground; you muſt open it with your ſmall wedge: and being thus grafted, it will ſeem to you that it is open but of one ſide; afterward you ſhall wrap it up with a little Moſs, putting thereto ſome gummed Wax, or Clay, and bind it up with Oziers to keep it ſurer, becauſe the ſtock is not ſtrong enough it ſelf to hold it, and you ſhall furniſh it every manner of way, as others are dealt withall; this is moſt profitable.

19.

20.

21.

The time of Grafting.

All Months are good to graft in, (the Month of *October* and *November* onely excepted) But commonly, graft at that time of

the winter, when the ſap beginneth to ariſe.

In a cold Country graft later, in a warm Country earlier.

The beſt time generally is from the firſt of *February*, untill the firſt of *May*.

The grafts muſt always be gathered in the old of the Moon.

For grafts chooſe ſhoots of a year old, or at the furthermoſt two years old.

If you muſt carry grafts far, prick them into a Turnip newly gathered, or lay earth about the ends.

If you ſet ſtones of Plums, Almonds, Nuts, or Peaches: Firſt, let them lye a little in the Sun, and then ſteep them in Milk or Water three or four dayes, before you put them into the earth.

Dry the Kirnels of Pippins, and ſow them in the end of *November*.

The ſtone of a Plum-tree muſt be Set a foot deep, in *November* or *February*.

The Date-ſtone muſt be Set the great end downwards, two cubits deep in the earth, in a place enriched with dung.

The Peach-ſtone would be Set preſently after the Fruit is eaten, ſome quantity of the fleſh of the Peach remaining about the ſtone.

If you would have it to be excellent, graft it afterward upon an Almond-tree.

The little Cyens of Cherry-trees, grown thick with hair, rots, and thoſe alſo which do grow up from the Roots of the great Cherry-trees, being removed, do grow better and ſooner then they which come of ſtones; but they muſt be removed and planted, while they are but two or three years old, the branches muſt be lopped.

A very profitable Invention, for the speedy Planting of an Orchard of Fruit-Trees.

ABout the end (or rather the middle) of *June*, the sap being then in the boughs or Tops of the Trees, let some one of discretion go up into the boughs of the Tree intended, and with a keen-knife cut the bark of some smooth bough, so chosen, round about the same, quite through the same bark, to the very bare wood, in two places, (toward the but of the bough) a full hand breadth the one from the other, and take off the bark clean clearly from the said bough, and cast it away, and wipe the sap off that bared place; Then take some of the stiffest clay you can have, and wrap it hard, round about the said bared place, (that it may stop the sap when it descendeth;) bind on this clay with fallow slings, or the like, very hard; let this clay be two inches thick at least. Then prepare a certain quantity of good rank mould, tempered with short muck and misken water, and make mortar thereof, and wrap a good quantity of it as big as a foot-ball, upon the firm bark remaining close above the said clay, that it may touch the same; put mos upon it, and, as before, bind it well, and so let it continue growing upon the same Tree till *February*. Then with a fine saw carefully take off the said bough close below the clay, not perishing the upper mortar, and set that bough, with the clay and mortar on it, in some good ground, and there let it remain to grow; for the sap it cannot pass downward for the clay, but stayeth in the upper mortar, and breeds roots, and possibly (God willing) may bear fruit the next Summer following. Thus you may order many such boughs as aforesaid, and quickly plant an Orchard of bearing Trees. If the bough be as big as the small of ones leg, it is so much the better: *probatum est.*

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THE

THE

HUSBAND-MAN'S
Fruitfull Orchard.

For the true ordering of all ſorts of Fruits in their due ſeaſons; and how double increaſe comes by care in gathering year after year: as alſo the beſt way of carrying by land or by water, with their preſervation for longeſt continuance.

OF all ſtone Fruit, Cherries are the firſt to be gathered: of which, though we reckon four ſorts; *Engliſh*, *Flemmiſh*, *Gaſcoign*, and *Black*, yet are they reduced to two, the early, and the ordinary; the early are thoſe whoſe grafts came firſt from *France* and *Flanders*, and are now ripe with us in *May*; the ordinary is our own natural Cherry, and is not ripe before *June*: they muſt be carefully kept from Birds, either with nets, noiſe, or other induſtry.

They

Gathering of Cherries.

They are not all ripe at once, nor may be gathered at once, therefore with a light Ladder, made to stand of it self without hurting the boughs, mount to the Tree; and with a gathering hook, gather those which be full Ripe, and put them into your Cherry-pot, or Kybzey hanging by your side, or upon any bough you please, and be sure to break no stalk, but that the cherry hangs by it, and pull them gently; lay them down tenderly, and handle them as little as you can.

To carry Cherries.

For the conveyance or portage of Cherries, they are best to be carried in broad Baskets like sives, with smooth yielding bottoms, only two broad laths going along the bottom; and if you do transport them by ship, or boat, let not the sives be filled to the top, lest setting one upon another, you bruise and hurt the Cherries: if you carry by horse-back, then panniers well lined with Fern, and packt full and close, is the best and safest way.

Other stone-fruit.

Now for the gathering of all other stone fruit, as Nectarines, Apricocks, Peaches, Pear-Plums, Damsons, Bullis, and such like, although in their several kinds, they seem not to be ripe at once on one Tree; yet when any is ready to drop from the Tree, though the other seem hard, yet they may also be gathered, for they have received the full substance the tree can give them; and therefore the day being fair, and the dew drawn away, set up your Ladder, and as you gathered your Cherries so gather them: onely in the bottom of your large sives, where you part them, you shall lay Nettles, and likewise in the top, for that will ripen those that are most unready.

Gathering of Pears.

In gathering of Pears are three things observed: To gather for expence, for transportation, or to sell to the Apothecary. If for expence, and your own use, then gather them as soon as they change, and are as it were half ripe, and no more but those which are changed, letting the rest hang till they change also: for thus they will ripen kindly, and not rot so soon as if they were full ripe at the gathering. But if your Pears be to be transported far, either by Land or Water, then pull one from the Tree, and cut it in the middest, and if you find it hollow about the coar, and the kernel a large space to lye in, although no Pear

be

be ready to drop from the Tree, yet then they may be gathered, and then laying them on a heap one upon another, as of neceſſity they muſt be for tranſportation, they will ripen of themſelves, and eat kindly: but gathered before, they will wither, ſhrink, and eat rough, loſing not onely their taſt, but beauty.

Now for the manner of gathering, albeit ſome climb into the trees by the boughs, and ſome by Ladder, yet both is amiſs; the beſt way is with the Ladder before ſpoken of, which ſtandeth of it ſelf, with a basket and a line, which being full, you muſt gently let down, and keeping the ſtring ſtill in your hand, being emptied, draw it up again, and ſo finiſh your labour, without troubling your ſelf, or hurting the Tree.

Gathering of Apples.

Now, touching the gathering of Apples, it is to be done according to the ripening of the fruit; your Summer Apples firſt, and the Winter after.

For Summer fruit, when it is ripe; ſome will drop from the Tree, and Birds will be pecking at them: But if you cut out one of the greeneſt, and find it as was ſhew'd you before of the Pear, then you may gather them, and in the houſe they will come to their ripeneſs and perfection. For your Winter-fruit, you ſhall know the ripeneſs by the obſervation before ſhewed; but it muſt be gathered in a fair, Sunny, and dry day, in the wain of the Moon, and no Wind in the Eaſt, alſo after the dew is gone away; for the leaſt wet or moiſture will make them ſubject to rot and mildew; alſo you muſt have an apron to gather in, and to empty into the great basket, and a hook to draw the boughs unto you, which you cannot reach with your hands at eaſe: The apron is to be an Ell every way, loopt up to your girdle, ſo as it may ſerve for either hand without any trouble; and when it is full, unlooſe one of your loops, and empty it gently into the great basket, for in throwing them down roughly, their own ſtalks may prick them, and thoſe which are prickt, will ever rot. Again, you muſt gather your fruit clean without leaves or brunts, becauſe the one hurts the Tree, for every brunt would be a ſtalk for fruit to grow upon; the other hurts the fruit by bruiſing, and pricking it, as it is laid together, and there is nothing ſooner rotteth fruit,

fruit, then the green and withered leaves lying among them; neither must you gather them without any stalk at all: for such fruit will begin to rot where the stalk stood.

To use the fallings.

For such fruit as falleth from the Trees, and are not gathered, they must not be laid with the gathered fruit; and of fallings there are two sorts, one that falls through ripeness, and they are best, and may be kept to bake or roast: the other windfals, falling before they are ripe, and they must be spent as they are gathered, or else they will wither and come to nothing; and therefore it is not good by any means to beat down fruit with Poles, or to carry them in carts loose and jogging, or in sacks where they may be bruised.

Carriage of fruit.

When your fruit is gathered, you shall lay them in deep Baskets of Wicker, which shall contain four or six bushels, and so between two men, carry them to your Apple Loft, and in shooting, or laying them down, be very carefull that it be done with all gentleness, and leasure, laying every sort of fruit severally by it self; but if there be want of room, having so many sorts that you cannot lay them severally, then some such fruit as is neareſt in taste and colour, and of Winter fruit, such as will taste alike, may, if need require, be laid together, and in time you may separate them, as shall be shewed hereafter. But if your fruit be gathered far from your Apple-loft, then must the bottoms of your Baskets be lined with green Fern, and draw the stubborn ends of the same through the Basket, that none but the soft leaf may touch the fruit, and likewise cover the tops of the Baskets with Fern also, and draw a small cord over it, that the Fern may not fall away, nor the fruit scatter out, or jogg up and down; and thus you may carry fruit by Land, or by Water, by Boat, or Cart, as far as you please: and the Fern doth not onely keep them from bruising, but also ripens them, especially Pears. When your fruit is brought to your Apple-Loft, or store-house, if you find them not ripened enough, then lay them in thicker heaps upon Fern, and cover them with Fern also: and when they are neer ripe, then uncover them, and make the heaps thinner, so as the air may pass through them; and if you will not hasten the ripening of them, then lay them on the boards without

out any Fern at all. Now for Winter, or long lasting Pears, they may be packt either in Fern or Straw, and carried whither you please; and being come to the journies end, must be laid upon sweet straw: but beware the room be not too warm, nor windy, and too cool, for both are hurtfull: but in a temperate place, where they may have air, but not to much.

Wardens are to be gathered, carried, packt, and laid as Winter Pears are. Of Wardens.

Medlers are to be gathered about *Michaelmas*, after the frost hath toucht them; at which time they are in their full growth, and will then be dropping from the tree, but never ripe upon the tree. When they are gathered, they must be laid in a basket, sieve, barrel, or any such cask, and wrapt about with woollen cloaths, under, over, and on all sides, and also some weight laid upon them, with a board between: for except they be brought into a heat, they will never ripen kindly, or taste well. Of Medlers.

Now when they have lain till you think some of them be ripe, the ripest, still as they ripen, must be taken from the rest; therefore powr them out into another sieve or basket leisurely, that so you may well find them that be the ripest, letting the hard ones fall into the other basket, and those which be ripe laid aside: the other that be half ripe sever also into a third sieve or basket; for if the ripe and half ripe be kept together, the one will be mouldy, before the other be ripe. And thus do till all be throughly ripe.

Quinces should not be laid with other fruit; for the scent is offensive both to other fruit, and to those that keep the fruit or come amongst them; therefore lay them by themselves upon sweet straw, where they may have air enough: they must be packt like Medlers, and gathered with Medlers. Of Quinces.

Apples must be packt in Wheat or Rye straw, and in maunds or baskets loined with the same, and being gently handled, will ripen with such packing and lying together. If several sorts of apples be packt in one maund or basket, then between every sort lay sweet straw of a pretty thickness. To pack Apples.

Apples must not be powred out, but with care and leisure: first, the straw pickt clean from them, and then gently take Emptying and laying apples.

take out every several sort, and place them by themselves: but if for want of room you mix the sorts together, then lay those together that are of equal lasting; but if they have all one taste, then they need no separation. Apples that are not of like colours should not be laid together, and if any such be mingled, let it be amended, and those which are first ripe, let them be first spent, and to that end, lay those apples together, that are of one time of ripening; and thus you must use Pippins also, yet will they indure bruises better than any other fruit, and whilst they are green will heal one another.

Difference in fruit.

Pippins though they grow of one tree, and in one ground, yet some will last better than other-some, and some will be bigger then others of the same kind, according as they have more or less of the Sun, or more or less of the droppings of the trees or upper branches: therefore let every one make most of that fruit which is fairest and longest laging. Again, the largeness and goodness of fruit consists in the age of the tree; for as the tree increaseth, so the fruit increaseth in bigness, beauty, taste, and firmness: and otherwise as it decreaseth.

Transporting fruit by water.

If you be to transport your fruit far by water, then provide some dry hogsheads or barrels, and pack in your apples, one by one, with your hand, that no empty place may be left, to occasion sogging; and you must line your vessel at both ends with fine sweet straw, but not the sides, to avoid heat; and you must then bore a dozen holes at either end, to receive air so much the better, and by no means let them take wet. Some use, that transport beyond seas, to shut the fruit under hatches upon straw; but it is not so good, if casks may be gotten.

When not to transport fruit.

It is not good to transport fruit in *March*, when the wind blows bitterly, nor in frosty weather, neither in the extream heat of Summer.

To convey small store of fruit.

If the quantity be small you would carry, then you may carry them in dossers or paniers, provided they may be ever filled close; and that Cherries and Pears be lined with green Fern, and Apples with sweet straw; and that, but at the bottoms and tops, not on the sides.

Rooms for fruit.

Winter fruit must lye neither too hot, nor too cold, too close, nor too open; for; all are offensive. A low Room or Cellar that

that is sweet, and either boarded or paved, and not too close, is good from *Christmas* till *March*; and Rooms that are seiled over-head, and from the ground, are good from *March* till *May*, then the Cellar again, from *May* till *Michaelmas*. The apple-loft would be seiled or boarded, which if it want, take the longest Rye-straw, and raise it against the walls, to make a fence as high as the fruit lyeth, and let it be no thicker than to keep the fruit from the wall, which being moist, may do hurt, or if not moist, then the dust is offensive.

Sorting of fruit.

There are some fruit which will last but untill *Allhallantide*; they must be laid by themselves: then those which will last till *Christmas*, by themselves; then those which will last till it be *Candlemas*, by themselves; those that will last till *Shrove-tide*, by themselves; and Pippins, Apple-Johns, Pear-mains, and Winter Russettings, which will last all the year, by themselves.

Now if you spy any rotten fruit in your heaps, pick them out, and with a Tray for the purpose, see you turn the heaps over, and leave not a tainted Apple in them, dividing the hardest by themselves, and the broken skinned by themselves to be first spent, and the rotten ones to be cast away; and ever as you turn them, and pick them, under-lay them with fresh straw: thus shall you keep them for your use, which otherwise would rot suddenly.

Time of stirring fruit.

Pippins, John-Apples, Pear-mains, and such like long lasting fruit, need not to be turned till the week before *Christmas*, unless they be mixt with the other of riper kind, or that the fallings be also with them, or much of the first straw left amongst them: the next time of turning is at *Shrove tide*, and after that once a month till *Whitson-tide*, and after that, once a fortnight; and ever in the turning lay your heaps lower and lower, and your straw very thin: provided you do none of this labour in any great frost, except it be in a close Cellar. At every thaw, all fruit is moist, and then they must not be touched: neither in rainy weather, for then they will be dank also; and therefore at such seasons it is good to set open your windows and doors, that the air may have free passage to dry them, and at nine of the clock in the forenoon in Winter, and at six in the forenoon,

and at eight at night in Summer; only in *March*, open not your windows at all.

All lasting fruit, after the midst of *May*, begin to wither, because then they wax dry, and the moisture gone which made them look plump, they must needs wither, and be small; and nature decaying, they must needs rot. And thus much touching the ordering of fruits.

FISCIS.